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ABSTRACT

This three-part curriculum for entrepreneurship education is primarily for postsecondary level, including four-year colleges and adult education, but it can be adapted for special groups or vocational teacher education. The emphasis of the eight instructional units in Part III is operating a business. Unit B focuses on good financial management techniques. It is designed to provide first-hand information in implementing basic financial management principles and strategies. Topics include financial statements, analyzing these statements, determining break-even points, and computing various operating ratios. Material is organized into three levels of learning which progress from simple to complex concepts: Exposure, Exploration, and Preparation/Adaptation. Each level contains preassessment; teaching/learning objectives; substantive information (questions in margins guide the students' reading); activities, including a postassessment; and a self-evaluation. Definitions of important terms are found at the beginning of the unit; a bibliography and listing of sources for further information are appended. The four-page instructor's guide contains the teaching/learning objectives, teaching/learning delivery suggestions, and pre/postassessment suggested responses. (LLB)

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ED199420

Research and Development Series No. 194 C-2

# PACE

## A PROGRAM FOR ACQUIRING COMPETENCE IN ENTREPRENEURSHIP

PART III: Being an Entrepreneur
UNIT B: Financial Management

The National Center for Research in Vocational Education
The Ohio State University
Columbus, Ohio 43210

1980

CE 028 162

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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PART III: BEING AN ENTREPRENEUR

UNIT B: FINANCIAL MANAGEMENT

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# FOREWORD

Traditionally vocational education has been geared primarily to preparing students for employment--to preparing employees. Yet there is another career path available; students can learn how to set up and manage their own businesses. They can become entrepreneurs.

Vocational education, by its very nature, is well suited to developing entrepreneurs. It is important that entrepreneurship education be developed and incorporated as a distinct but integral part of all vocational education program areas. A Program for Acquiring Competence in Entrepreneurship (PACE) represents a way to initiate further action in this direction.

The strength behind these instructional units is the interest and involvement of vocational educators and successful entrepreneurs in the state of Ohio and across the nation. Special recognition is extended to the project staff: Lorraine T. Furtado, Project Director and Lee Kopp, Program Associate. Appreciation is also expressed to the many who reviewed and revised the drafts of the units: Ferman Moody, Hannah Eisner, and Sandra Gurvis. We owe a special thanks to those consultants who contributed to the content of this publication: Carol Lee Bodeen, Louis G. Gross, Douglass Guikema, Peter G. Haines, Philip S. Manthey, Charles S. McDowell, Mary E. McKnight, Steven R. Miller, Barbara S. Riley, Barbara A. Rupp, Ruth Ann Snyder, Robert L. Suttle, Florence M. Wellman and Roy H. Young.

Robert E. Taylor
Executive Director
The National Center for
Research in Vocational Education

# HOW TO USE PACE

A Program for Acquiring Competence in Entrepreneurship (PACE) is a curriculum responsive to the need for instruction in entrepreneurship. It is primarily for postsecondary level, including four year colleges and adult education, but it can also be adapted for special groups. PACE is divided into three parts (1) Getting Ready to Become an Entrepreneur, (2) Becoming an Entrepreneur (establishing a business), and (3) Being an Entrepreneur (operating a business).

Each of the three parts has a set of instructional units which relate to that topic. Within these units, the material is organized into three levels of learning: Exposure, Exploration, and Preparation/Adaptation. These levels of learning progress from simple to complex concepts.

The levels of learning will enable you to use the PACE materials to suit your individual needs. You may find it best to work with the exposure level of one unit and the exploration level of another. Or, you may choose to pursue one level throughout the entire series. You might also want to work through two or more levels in one unit before going on to the next unit.

Before beginning a unit, discuss with your instructor what level or levels of learning in that unit are most appropriate to your goals and abilities. Read the unit overview and look through the pre/post-assessments for the three levels to help you in your choice. Also check the list of definitions you might need to look up or research for that level.

When you are ready to start, turn to the level you have chosen, take the preassessment and identify those items which you feel need special attention in the unit. Also look at the learning objectives; they will tell you what you should be able to do by the time you finish that level of learning.

As you read, you will notice questions in the margins alongside the substantive content portion of each level. Use these questions to guide your reading.

At the end of each level of learning are activities which help you become involved with the content presented in the unit. You and your instructor can decide on how many activities you should do; you may want to do several or you many need to do all.

Then, evaluate yourself. Is there any material that you need to review before you take the postassessment? The difference in your answers on the pre/postassessments should show you how much you have grown in your knowledge of entrepreneurship.

When you and your instructor feel that you have successfully completed that level, you are ready to begin another level of learning, either in the same unit or in another.

# OVERVIEW OF THE UNIT

Once the entrepreneur has established the business, management decisions must be aimed at keeping it operational and fostering growth. In order to accomplish both these goals, the entrepreneur must use good financial management techniques. Good management techniques will allow you, the entrepreneur, to maintain financial control of the enterprise and improve profits.

This unit is designed to provide first-hand experience in implementing basic financial management principles and strategies. As you complete this unit, you will become familiar with financial statements, and how to analyze these statements. You will also learn how to determine break-even points and compute various operating ratios.

# DEFINITIONS TO KNOW BEFORE YOU BEGIN

As you read through a level, you might find some unfamiliar words. Listed below are several business terms used in each level. Knowin these before you begin might help you to better understand that level.

## EXPOSURE

| | | |
|---|---|---|
| cash flow | liabilities | gross profit |
| balance sheet | accounts receivable | net profit |
| profit and loss statement | accounts payable | profit margin |
| break-even point | net worth | current ratio |
| assets | cost of goods sold | trade creditors |

## EXPLORATION

| | | |
|---|---|---|
| balance sheet | equity | gross sales |
| profit and loss statement | net worth | net profit |
| assets | accounts receivable | net sales |
| liabilities | convertability | depreciation |
| current assets | average - collection ratio | current ratio |
| fixed assets | inventory ratio | acid - test ratio |
| cost of goods sold | gross profit or margin | |
| break-even point | liquid assets | |

## PREPARATION/ADAPTATION

assets
liabilities
balance sheet
profit and loss statement
cost of goods sold
gross margin
current ratio
acid test ratio
inventory ratio
working capital
tangible net worth
owner's equity statement
break-even point
equity
variable costs

# PACE

## PATH OF STUDY

PART I-- GETTING READY TO BECOME AN ENTREPRENEUR

Unit I A

Unit I B

Unit I C

PART II-- BECOMING AN ENTREPRENEUR

Unit II A

Unit II B

Unit II C

Unit II D

Unit II E

Unit II F

Unit II G

PART III -- BEING AN ENTREPRENEUR

Unit III A

Unit III B -- Financial Management

Unit III C

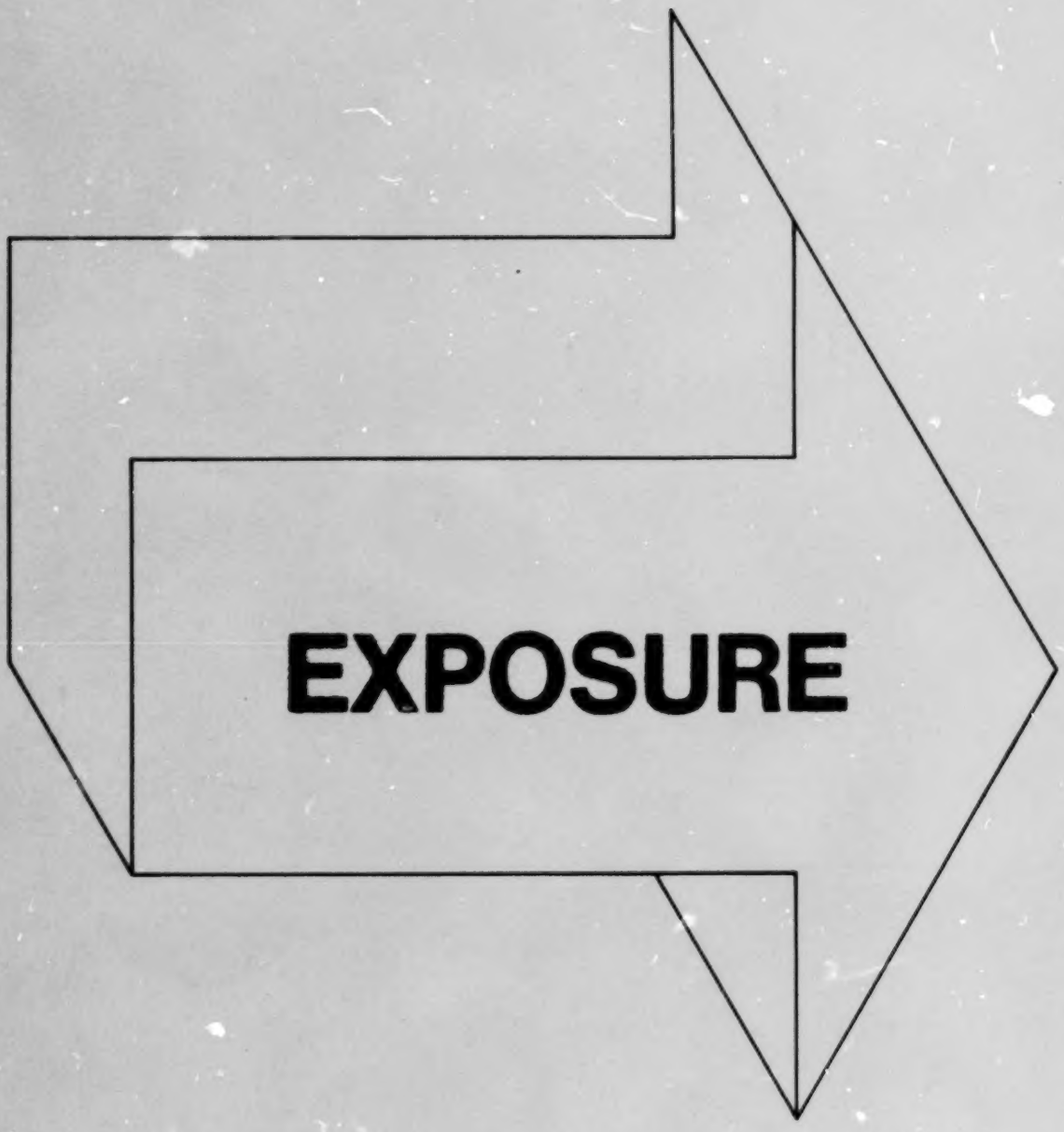
Unit III D

Unit III E

Unit III F

Unit III G

Unit III H


EXPOSURE

EXPOSURE

PART III, UNIT B
FINANCIAL MANAGEMENT

## PREASSESSMENT

Here are some questions that test for knowledge of the contents of this level. If you are very familiar with the information needed to answer them, perhaps you should go to another level or unit -- check with your instructor. Otherwise, jot down your answers. After you've read through this level, take the postassessment at the end of the "Exposure Activities" section and measure what you've learned.

1. What is a balance sheet?
2. What information does a profit and loss statement contain?
3. Describe how ratio analysis information might be used by an entrepreneur.
4. What information does knowing the break-even point provide to the entrepreneur?
5. What is meant by cost of goods sold and net profit

## TEACHING/LEARNING OBJECTIVES

Upon completion of this level of instruction, you should be able to:

1. Describe a balance sheet.
2. List the components of a profit and loss statement.
3. Describe the importance of ratio analyses.
4. Describe what is meant by break-even point.

## SUBSTANTIVE INFORMATION

### DEVELOPING SKILLS IN FINANCIAL MANAGEMENT

*WHY DEVELOP SKILLS IN FINANCIAL MANAGEMENT?*

It is important to the future growth of your business that you develop some skills in the area of financial management. Good financial management can be the key to the survival of your business. Your income from sales may be over and beyond that estimated for your business, but the business can fail if income and business expenses are poorly managed. On the other hand, your firm may be making only a slight profit, but with good financial management the business can survive.

Even if you have an accountant prepare your financial statements, you should be able to understand and analyze these statements. This will help keep you in control of your business.

There are two basic financial statements with which you should be totally familiar. These are the balance sheet and the profit and loss statement. You should also be aware of the use of break-even analyses and business ratios.

### THE BALANCE SHEET

*WHAT IS A BALANCE SHEET?*

A balance sheet is a statement that tells what you <u>own</u> and what you <u>owe</u> at any particular time. It is like a photograph of your business on one particular day.

Most likely, balance sheets prepared for three consecutive days will be comprised of different figures. Financial information about a business--or about yourself as an individual--changes every day. You receive income periodically and you pay bills periodically. In effect, you manage a flow of cash.

If your cash is always in motion, why is the balance sheet so important? The balance sheet helps you control this cash flow. This control enables you to manage both your financial resources (what you own) and your debts (what you owe) effectively. The balance sheet helps the business stay profitable.

## Components of a Balance Sheet

*WHAT ARE THE "SECTIONS" IN A BALANCE SHEET?*

The balance sheet has three main sections (1) assets, (2) liabilities, and (3) net worth. Exhibit A illustrates the components of a balance sheet. Exhibit A can be used by single proprietorships, partnerships, or corporations.

All balance sheets must follow this formula: Assets = Liabilities + Net Worth. Assets must equal liabilities plus net worth. Or, the total derived for those items on the left side of the balance sheet under assets must exactly equal the total derived for the right side of the balance sheet under liabilities plus net worth. All the main sections of this type of financial statement must balance.

Exhibit A

**BALANCE SHEET**

**DATE**

| ASSETS | | LIABILITIES | |
|---|---|---|---|
| Current - | Cash | Current - | Notes Payable |
| | Merchandise | | Accounts Payable |
| | Accounts Receivable | Non-Current Liabilities - | Debts More Than One Year Maturity |
| Fixed - | Land | | |
| | Building | TOTAL LIABILITIES | |
| | Machinery | | |
| | Equipment | OWNERSHIP OR NET WORTH | |
| Other - | | Proprietorship Net Worth or Partnership Net Worth or Corporate Net Worth | |
| TOTAL ASSETS | | TOTAL LIABILITIES AND NET WORTH | |

Assets are anything that the business owns, including cash on hand, equipment, real estate, and inventory. Current assets include cash and anything that can be changed into cash within twelve months. Current assets include cash on hand or in the bank, accounts receivable, and inventory. Fixed assets are those items that usually cannot be changed into cash within a twelve-month period of time. Usually they are items that the business has acquired for long-term use. Fixed assets include land or buildings purchased, machinery, equipment, or company vehicles such as delivery trucks or vans.

Liabilities are anything that the business owes. Liabilities might include loans, trade credit notes due, income taxes, or mortgages. A current liability is anything you owe that can be paid by using a current asset. Current liabilities are usually due within twelve months. Current liabilities include income taxes, loans, and bills due to trade creditors. A long-term liability includes any debts that will not be paid within twelve months. A mortgage on property is an example of a long-term liability.

Net worth is the owned investment in the business. It is the owner's investment in a single proprietorship, the partners' investment in a partnership, or the stock investment in a corporation.

## THE PROFIT AND LOSS STATEMENT

*WHAT IS A PROFIT AND LOSS STATEMENT?*

The profit and loss statement can be compared to a movie of the activities of the business during a certain period of time. Profit and loss statements are usually developed at the end of an accounting period, e.g., at the end of the month or at the end of the fiscal year.

### Components of a Profit and Loss Statement

*WHAT ARE THE "SECTIONS" OF A PROFIT AND LOSS STATEMENT?*

Profit and loss statements have five major components. These parts are (1) the total sales, (2) the cost of goods sold, (3) the gross profit, (4) expenses, and (5) net profit. Each of these components provides important financial data about the firm. Exhibit B is an example of a typical profit and loss statement.

The total sales component includes both cash and credit sales. It does not include sales tax collected or products returned.

Cost of goods sold is the amount that it costs you to buy or produce the goods that you sold. If you are a manufacturer, you would also inventory raw materials and products in process and include this information. Cost of goods is calculated by taking a beginning inventory, adding materials or products purchased during the accounting period, then subtracting inventory remaining at the end of the accounting period.

Exhibit B

PROFIT AND LOSS STATEMENT

For Period Ending_____

| | |
|---|---|
| TOTAL SALES | $75,000 |
| COST OF GOODS SOLD: | |
| Beginning Inventory | 55,000 |
| (Plus) Purchases | 10,000 |
| (Less) Ending Inventory | 15,000 |
| TOTAL COST OF GOODS SOLD | $50,000 |
| GROSS PROFIT | $25,000 |
| EXPENSES: | |
| Salaries | $18,000 |
| Payroll Taxes | 3,500 |
| Rent | 4,500 |
| Advertising | 1,000 |
| Etc. | -0- |
| TOTAL EXPENSES | $26,000 |
| NET PROFIT (LOSS) (BEFORE TAXES) | ($1,000) |

Gross profit is the amount of profit made from sales before operating expenses are deducted. Gross profit is calculated by subtracting the cost of goods sold from the total sales.

Expenses include all costs involved in running the business. The list shown in Exhibit B is very incomplete. Most firms would have many more expenses.

Net profit is your profit or loss at the end of the accounting period. This does not include taxes you may need to pay on the business. In Exhibit B, the firm does not have a profit. The net profit figure is shown as a $1,000 loss.

## USING FINANCIAL STATEMENTS

*HOW CAN FINANCIAL STATEMENTS BE USED?*

A quick inspection of both types of statements can often give the entrepreneur information about the "health" of the business. Information shown on the statements can be compared to goals for the business. The profit and loss statement can be examined to determine where to cut expenses. There are also several ways of looking at your statements to see if a profit has been or will be earned.

## Ratio Analyses

*WHAT ABOUT THE VARIOUS RATIO ANALYSES?*

Information in the financial statements can be utilized to compute various commonly used business ratios. Each ratio is determined by "comparing" different pieces of financial information. These ratios provide the following information:

- The return on your investment in the business. This information should show that you are making a better percentage return on the investment in the company than you would by investing your money elsewhere.
- The net profit margin on sales. This information will help you examine your pricing policy and operating costs.
- Inventory turnover. This information will show you how fast products and merchandise are being sold.
- Average collection period. This information will tell you how quickly credit sales are being collected.
- The current ratio. This information will tell you whether the business has enough current assets to meet current debts.

A financial ratio is useless by itself. Each ratio provides distinct information, and becomes useful when compared to other data, such as conditions during an earlier time period. Analysis of these ratios is one method of comparing your company with other companies or with the industry as a whole. These comparisons can point out a firm's strengths and trouble spots.

Ratio data for small businesses similar to yours can be found in several sources. Trade associations often publish typical ratios for retail, wholesale, and manufacturing firms. Many public accounting firms can compare and evaluate your ratios. Another source of ratios is Key Business Ratios, by Dun and Bradstreet, who publish a series of ratios for 125 lines of business.

## BREAK-EVEN POINT

*WHAT IS A BREAK-EVEN POINT?*

The break-even point is the point at which the business is operating with no profit or loss; at this point expenses equal sales. The break-even point is the level of sales that exactly covers total cost.

The following formula is used when computing the break-even point:

$$S = F + V$$

This means that sales equals fixed expenses plus variable expenses.

To determine the break-even point, you must categorize expenses as being either fixed or variable. Fixed expenses are those which remain unchanged when sales change. They include such expenses as depreciation of plant and equipment, rentals, interest charges on debts, and many general office expenses. Variable expenses are those which change in proportion to changes in sales, such as sales commissions, factory labor, cost of goods sold, and other selling expenses.

Break-even point analysis is basically a way of determining how much sales volume you will need in order to break even. Break-even analysis also helps you examine the effects of your expenses on profits.

Every business owner wants to do better than break even, so you can use the break-even point analysis to help determine what you might do to achieve a profit. It is also an effective financial tool which allows you to take a good look at your business plan and determine whether your firm can reach the plan's objectives. With the information derived from the break-even analysis, you can answer several questions, such as, Can you realistically produce or sell the amount required to simply break even? Can you realistically produce more so that you can make a profit? If the answer to both questions is "no," then you will need to go back and revise your business plan. You may have to adjust expenses, prices, or both.

## EXPOSURE ACTIVITIES

Financial management is a very important part of all businesses. Try these activities to test your financial management skills.

ASSESSMENT ONE

1. Prepare a balance sheet of your personal belongings including any investments such as stock, savings bonds, etc. List all debts that you may have. To make the statement balance, enter any excess of assets over liabilities in the net worth part of the balance sheet.
2. Interview at least two small business owners in your community. Ask them what financial statements they use and why. Do they prepare their own statements or use an accountant? How do they use the information? You might want to record and compare your responses using the following chart:

| Financial Statements - Are They Important? | | | |
|---|---|---|---|
| | Statements Used | Prepared By | How Information Used |
| Business #1 | 1<br>2 | Self-Accountant-<br>Self-Accountant- | 1<br>2<br>3 |
| Business #2 | 1<br>2 | Self-Accountant-<br>Self-Accountant- | 1<br>2<br>3 |

3. What is the chief difference between a balance sheet and a profit and loss statement? Explain.

ASSESSMENT TWO

Several words dealing with financial management and used in this level have been hidden in the puzzle below. Find and circle them. The answers to this puzzle are on Page 16.

R E I P L B O C N D O A H N P
Q K E L M A C L A B B G F M R
A J C I B U D C O D A D V K O
H A X A S S E T S H L I N Z F
P S T B U V A W T S A L E S I
R A T I O S V S P H N I T A T
A G E L P Q F I C R C K P Q A
W D J I E M B J E L E L R B N
C O S T O F G O O D S S O L D
U A V I W N K F X L H R F C L
I B R E A K E V E N E F I S O
C A Y S D O G Y N M E G T D S
Z Y O J N E T W O R T H E T S

POSTASSESSMENT

1. What is a balance sheet?
2. What information does a profit and loss statement contain?
3. Describe how ratio analysis information might be used by an entrepreneur.
4. What information does knowing the break-even point provide to the entrepreneur?
5. Explain what is meant by cost of goods sold and net profit.

Compare your answers to your responses to the preassessment. You may want to check your postassessment answers with your instructor.

## SELF-EVALUATION

How well did you know the information needed to do the activities?

( ) Very well

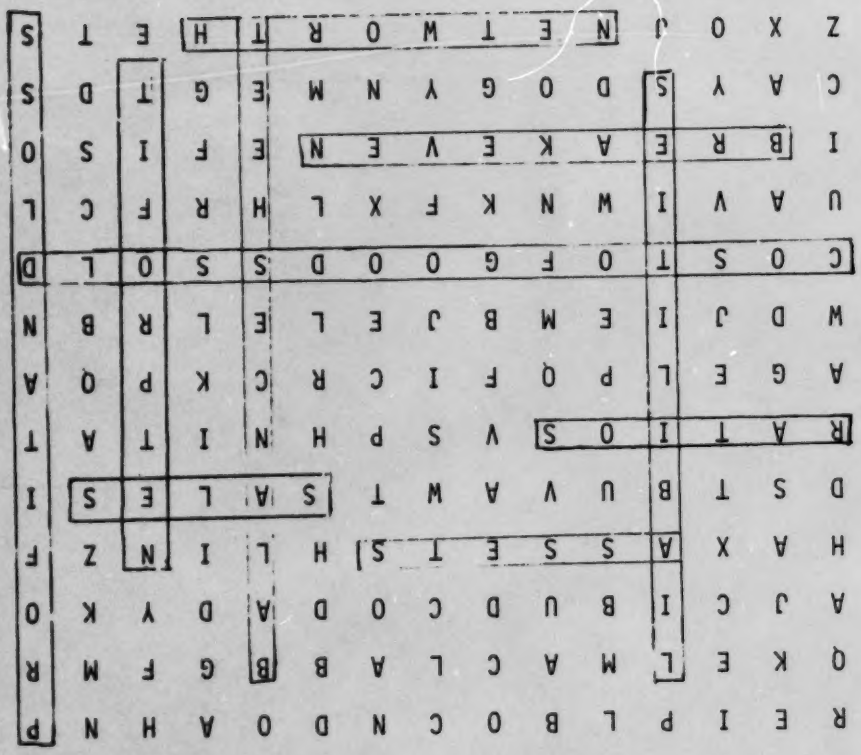
( ) Fairly well

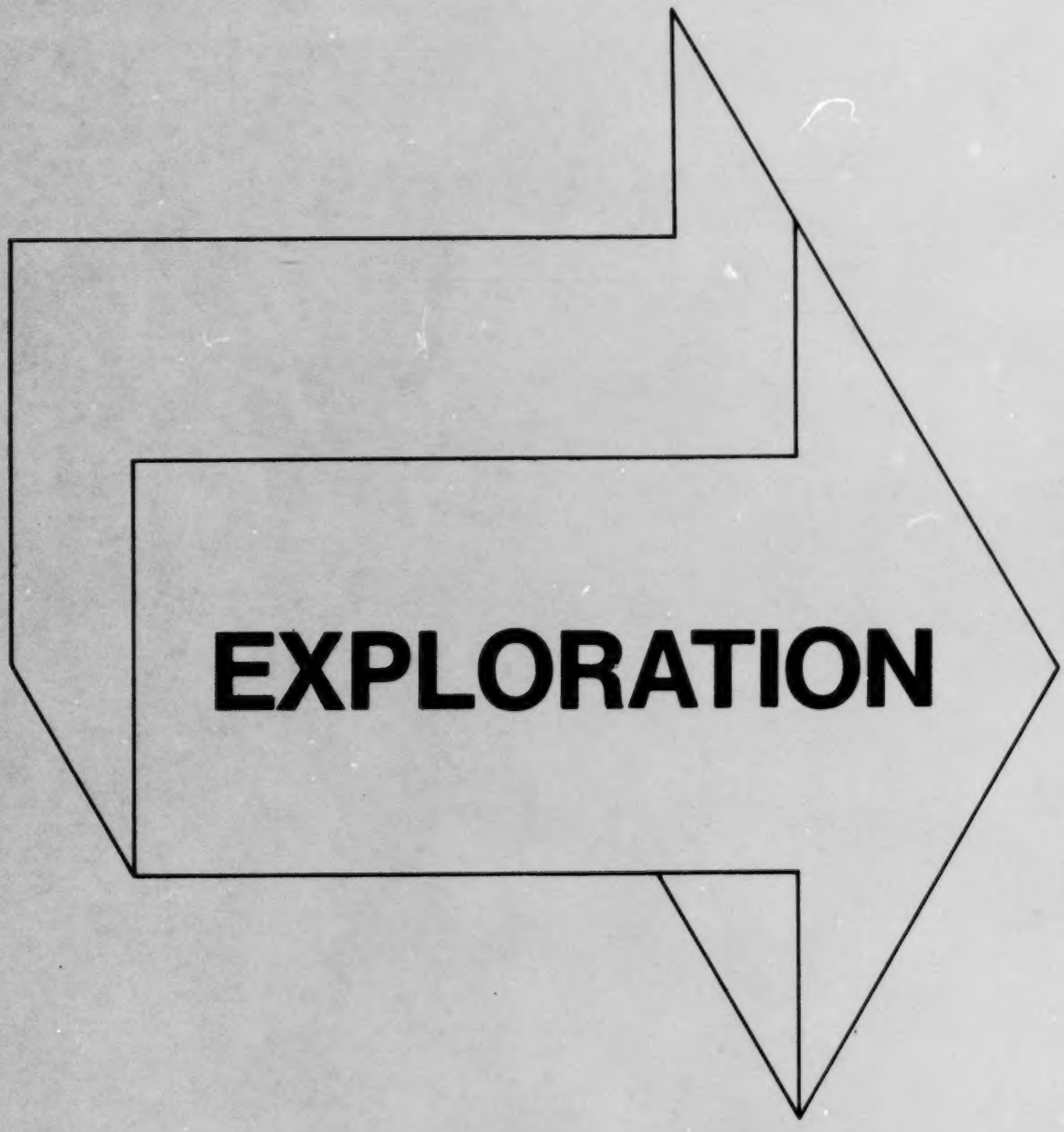
( ) A little.

Be honest with yourself. If you feel you don't know the material well enough, it might be helpful to review this section before going on.

**Answer to Assessment Two:**

For answers to Activity 2, turn page upside down.




EXPLORATION

## PREASSESSMENT

Here are some questions that test for knowledge of the contents of this level. If you are very familiar with the information needed to answer them, perhaps you should go to another level or unit -- check with your instructor. Otherwise, jot down your answers. After you've read through this level, take the postassessment at the end of the "Exploration Activities" section and measure what you've learned.

1. What is the difference between a balance sheet and a profit and loss statement?
2. What are assets and liabilities? Name the types of assets and liabilities.
3. What are the functions of financial management?
4. Describe these ratios and state the formula for each:
    a. Current ratio
    b. Average collection ratio.
5. What is break-even volume? Give the formula for determining these figures.

## TEACHING/LEARNING OBJECTIVES

Upon completion of this level, you should be able to:

1. Describe the difference between a balance sheet and a profit and loss statement.
2. Differentiate between current and fixed assets.
3. Describe and compute four commonly used business ratios.
4. Describe the use of break-even point and write the formula for computing it.
5. Discuss the importance of financial management as it relates to making a profit.

## SUBSTANTIVE INFORMATION

### IMPORTANCE OF FINANCIAL MANAGEMENT

*WHY IS UNDERSTANDING FINANCIAL MANAGEMENT IMPORTANT?*

Most companies and firms of significant size have sophisticated tools, techniques, and personnel to oversee the financial affairs of the business. This is not the case for the typical small business owner. You, the entrepreneur, will need to utilize basic accounting statements which reflect the results of the business operation and tell its present financial condition. Even if you have your financial statements prepared by an accountant, you should understand how they are put together, what they tell you, and some of the ways in which you can use them.

Financial management includes the following functions:

- Being sure that the business assets are used wisely to bring the highest possible return on the capital invested
- Evaluating the need for new assets
- Getting funds to acquire more assets
- Paying off debts from the profits they generated

Management decisions you make must be aimed at making sure your firm stays in operation and grows.

A primary reason for owning and operating your own business is to make a profit. You have risked capital to do this. Therefore, your basic goal is to take care of the capital invested in the business and to use it as profitably as possible. Sales or

service volume is necessary to generate profits, but you need to know how to price your goods or services based upon today's costs of doing business. Business ventures that fail are usually operated by those who cannot discern whether profits are being made.

There are some basic accounting tools that will help put you in financial control of your business. The balance sheet and the profit and loss statement are two financial statements you will need to understand and analyze. In addition, knowledge of business ratio analysis and break-even analysis will be very helpful.

## THE BALANCE SHEET

*WHAT IS THE BALANCE SHEET?*

The balance sheet is a picture of what your business owes and owns at a particular time. It is a photograph of your company's assets, liabilities, and net worth. Assets and liabilities are balance sheet items classified or categorized as to their maturity. Net worth reflects the owner's investment in the business.

This financial statement must balance. That is, assets must equal liabilities plus net worth: the total of those items on the left side under assets must exactly equal the total of the right side under liabilities and net worth. There must be a balanced relationship between the availability (convertibility) of the assets and the maturity of the liabilities.

When you construct a balance sheet for your business, you implement some facet of control over your business. This control device points up the need for planning--planning in the sense the proper balance must exist.

Exhibit C illustrates a balance sheet suitable for the entrepreneur just starting in business, and includes the general components. This balance sheet format can be used by sole proprietorships, partners, or corporations. Exhibit D is an example of a personal balance sheet. Exhibit E reflects assets and liabilities that would be more characteristic of a business that owns equipment and inventory.

Exhibit C

| BALANCE SHEET | |
|---|---|
| ASSETS | |
| Current - Cash<br>Merchandise<br>Accounts Receivable | Current - Notes Payable<br>Accounts Payable |
| Fixed - Land<br>Building<br>Machinery<br>Equipment | Long-Term Liabilities<br>Debts<br>(More Than One-Year<br>Maturity) |
| Intangible -<br>Goodwill<br>Franchise<br>Patents and<br>Copyright | OWNERSHIP OR NET WORTH<br>Proprietorship Net Worth<br>or<br>Partnership Net Worth<br>or<br>Corporate Net Worth |
| Other - Cash Value of<br>Life Insurance | |
| Total Assets | Total Liabilities Plus<br>Net Worth |

Name _____

Business _____

Location _____

# Exhibit D
## BALANCE SHEET

_____ 19 ___

The undersigned, for the purpose of procuring and maintaining credit with your bank on negotiable paper or otherwise, hereby furnish and warrant the following facts to you, which fully and truly represent the financial condition of the undersigned on _____ day of _____ 19 ___, (should the day be left blank, the date of the statement will be taken for the day), which facts and representations you can consider as continuing and remaining full, true and accurate unless notice of change is given you, and agreement is hereby made, to notify you promptly of any change in financial condition that materially reduces the pecuniary responsibility of the undersigned.

In consideration of the granting of credit the undersigned agree that in the event of failure, insolvency or committing an act of bankruptcy; if any of the representations below are untrue; if the undersigned fail to notify you in writing of any change as before agreed; then, or in either case, all obligations of the undersigned held by you shall immediately become due and payable without demand or notice and the same may be charged against the balance of any account to the credit of the undersigned with you. A continuing lien is hereby given on any balance on deposit to the credit of the undersigned; also choses in action, from time to time existing, to secure all obligations of the undersigned held by you.

It is hereby expressly agreed and understood that in the event I make application for further credit or for the renewal or extension of any existing indebtedness, this statement shall be as valid and binding as if delivered as a true and correct statement of my financial condition on the date such further credit, extension or renewal is requested and granted.

**FILL ALL BLANKS. WHERE NO ANSWER IS GIVEN, "NO" OR "NONE" WILL BE TAKEN FOR YOUR ANSWER.**

| ASSETS | | | LIABILITIES | | |
|---|---|---|---|---|---|
| Cash on hand and in bank | | | Notes owed by me—without security | | |
| Accounts due me—Good | | | Notes owed by me—with security other than real estate | | |
| Unsecured loans due me—Good | | | Notes or mortgages owed by me—with real estate as security | | |
| Secured loans due me | | | Notes owed by me—with Chattel Mortgage as security | | |
| Mortgaged loans due me | | | Accounts owed by me | | |
| Stocks and Bonds | | | Any other indebtedness—itemize | | |
| United States Securities | | | | | |
| Land | | | | | |
| Buildings | | | | | |
| Any other property or investments—itemize | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | TOTAL LIABILITIES | | |
| TOTAL | | | NET WORTH | | |
| | | | TOTAL | | |

### CONTINGENT LIABILITY OF ANY KIND

| | | |
|---|---|---|
| On Notes of others endorsed by me | | |
| As Guarantor for accounts and notes of others | | |
| On Notes exchanged with others | | |
| As Bondsman or Surety for others | | |
| For Leases | | |
| Other than above specified | | |
| TOTAL | | |

### DETAILS RELATIVE TO ASSETS AND LIABILITIES

LAND AND BUILDINGS:-

| DESCRIPTION AND LOCATION | TITLE IN WHOSE NAME | ASSESSED VALUE | APPRAISED VALUE | MORTGAGES | INSURANCE | RENTALS RECEIVED LAST FISCAL YEAR |
|---|---|---|---|---|---|---|
| | | $ | $ | $ | $ | $ |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

By whom appraised? _____ When? _____

Taxes paid to what date? _____

Exhibit E

# INDIVIDUAL OR CORPORATION
# FINANCIAL STATEMENT
(SHORT FORM)

NAME _____ _____ (DATE)

BUSINESS OR OCCUPATION _____ ADDRESS _____

TO _____ (NAME OF BANK)

FOR THE PURPOSE OF OBTAINING ADVANCES FROM TIME TO TIME ON BILLS, NOTES AND OTHER COMMERCIAL PAPER SIGNED OR ENDORSED BY THE UNDERSIGNED, AND OF OBTAINING CREDIT GENERALLY, THE UNDERSIGNED MAKES THE FOLLOWING STATEMENT OF _____ FINANCIAL CONDITION AS OF THE CLOSE OF BUSINESS ON THE _____ DAY OF _____ 19___, AND CERTIFIES TO THE ABOVE-NAMED BANK THAT THE INFORMATION HEREINAFTER SET FORTH IS IN ALL RESPECTS TRUE, ACCURATE AND COMPLETE AND CORRECTLY REFLECTS THE FINANCIAL CONDITION OF THE UNDERSIGNED ON THE DATE AFOREMENTIONED.

(FILL ALL BLANKS, WRITING "NO" OR "NONE" WHERE NECESSARY TO COMPLETE INFORMATION.)

| ASSETS | | LIABILITIES | |
|---|---|---|---|
| CASH ON HAND AND IN BANKS | | NOTES PAYABLE TO BANKS (SEE SCHEDULE) | |
| NOTES RECEIVABLE | | NOTES PAYABLE TO OTHERS (SEE SCHEDULE) | |
| ACCOUNTS RECEIVABLE | | ACCOUNTS PAYABLE (SEE SCHEDULE) | |
| MERCHANDISE | | TAXES DUE | |
| LIFE INSURANCE—CASH SURRENDER VALUE (DO NOT DEDUCT LOANS) | | RENT DUE | |
| SECURITIES (SEE SCHEDULE) | | LOANS AGAINST LIFE INSURANCE | |
| OTHER CURRENT ASSETS (ITEMIZE) | | ACCRUED EXPENSES | |
| | | CHATTEL MORTGAGES | |
| | | REAL ESTATE MORTGAGES | |
| REAL ESTATE (SEE SCHEDULE) | | RESERVES (ITEMIZE) | |
| MACHINERY, FURNITURE AND FIXTURES (USED IN BUSINESS) | | | |
| PREPAID EXPENSES | | OTHER LIABILITIES (ITEMIZE) | |
| OTHER ASSETS (ITEMIZE) | | | |
| | | TOTAL LIABILITIES | |
| | | NET WORTH (IF NOT INCORPORATED) | |
| | | CAPITAL STOCK (IF INCORPORATED) | |
| | | PREFERRED ____ SHARES $ ____ PAR | |
| | | COMMON ____ SHARES $ ____ PAR | |
| | | SURPLUS | |
| TOTAL | | TOTAL | |

| CONTINGENT LIABILITIES | | | |
|---|---|---|---|
| LIABILITY AS ENDORSER ON NOTES OF OTHERS | | ALL OTHER CONTINGENT LIABILITIES: (ITEMIZE) | |
| LIABILITY AS GUARANTY OR SURETY FOR DEBTS OF OTHERS | | | |
| LIABILITY FOR JUDGMENTS OR SUITS PENDING | | TOTAL CONTINGENT LIABILITIES | |

## Assets

*WHAT ABOUT ASSETS?*

Assets are balance sheet entries that show what your business owns. Assets can be categorized as either current, fixed, intangible, and other. These categories are based on the availability of items; that is, the length of time it takes to convert them to cash. These categories can help you control your business and describe the assets your business owns. To guide management of the business, each item should be analyzed and compared in a consistent, meaningful manner. These comparisons will reflect changes in the financial picture of your business over a period of time. If your business is going to have an effective inventory policy and maintain capital investment that has a proper balance of fixed and current assets, then a realistic and accurate picture of what your business owns should always be available.

Current assets are those assets that, in the normal course of business, are expected to be converted into cash within twelve months. The reason for the twelve-month stipulation is twofold. First, most business managers consider that length of time as a normal cycle for their business. Second, tax returns with state and local governments are filed on an annual basis. When you are attempting to assign the assets to this category, ask yourself this question: "What is the likelihood that this asset

will be converted into cash within twelve months?" Merchandise and accounts receivable are normally defined as current assets on a balance sheet. However, using the twelve-month rule, it is possible that a portion of either one of these categories may not be considered a current asset. Suppose someone owes your business some money and you are carrying the amount due as part of your accounts receivable. Because of the nature of the contract or sale, it is agreed that payment will not be due for eighteen months. The sale will not be turned into cash within the twelve-month period. Or, suppose your firm has some inventory that, because of its nature, is either seasonal or currently unfashionable. If you estimate that it will be more than twelve months before a sale can be made, then this particular item of merchandise should be treated as another type of asset and not a current asset.

Fixed assets are assets which are used over a period of several years of normal operations. Generally speaking, they are used to help convert current assets into cash. For example, a retailer operates a business from a building he or she owns. The building is an investment which houses the retailer's inventory. Because the building probably has a useful life of more than twelve months, it is considered an asset of a somewhat more permanent nature than inventory or accounts receivable. The building is a

fixed asset, for without it the retailer would probably have a difficult time converting inventory into cash. When looking at a balance sheet that is comprised totally of fixed assets, you should remember that the value of the fixed assets may be based on cost less any depreciation. A more realistic estimate of worth may be the market value or the value it would take to replace the fixed assets.

The three examples listed in Exhibit C are probably the three most common intangible assets that a small business can have. Goodwill is the value that accrues to a business from customers, image in the community, or reputation of servicing the public. Determining a value for it is arbitrary. However, if you were to purchase an ongoing business, most likely a portion of the purchase price would be for this intangible asset. Other common examples of intangible assets are franchise fees, patents, and copyrights, which are tangible only in that a legal document substantiates their existence.

Other assets is a catchall category of assets. If an asset is not current, fixed, or intangible, it should be included in the "other assets" category. The asset most commonly found in this category is the cash value of any life insurance. This value represents your "equity" in or "ownership" of an ordinary life insurance policy purchased for yourself. As you pay premiums over the life of the policy, a certain cash value accumulates and is available to you by borrowing from a bank or the insurance company. Or you may wish to cancel the policy.

Other assets may also include accounts receivable, or other debts due to you that are not current, and investments, such as stocks and bonds, that you may have in other companies.

## Liabilities

*WHAT ARE LIABILITIES?*

Business liabilities express the cash value of what you owe to others. They are closely tied to business assets. Liabilities are debts incurred by the business to acquire assets. Liabilities may be classified as current liabilities or long-term liabilities.

A current liability is an obligation you owe to some individual or firm which will be settled by use of a current asset. Usually, a current liability matures or comes due within twelve months. These liabilities are debts that are due within one year to be paid with cash assets or assets which will be converted into cash within ninety days.

The most common type of current liability is accounts payable. When you order and receive merchandise and services for labor performed, you incur a debt that usually will have to be paid within one year. These debts are considered accounts payable in that they are due on account with your suppliers.

Other types of current liabilities are withholding and social security taxes payable. These are liabilities that cause entrepreneurs considerable problems. Money withheld from your salary and your employees' salaries in the form of payroll and income taxes must be submitted to federal, state, and local governments within specified time periods, usually quarterly. Some businesses that are short on funds will use this money for operating purposes and ultimately place themselves in difficulty with the Internal Revenue Service or other taxing authorities.

Another common type of current liability is the portion of a long-term debt that is due within one year. Examples of this type of current liability include mortgages and long-term notes payable.

Long-term liabilities are those debts that are due after twelve months of maturity. They consist normally of real estate mortgages, long-term loans, and similar obligations. Usually the funds obtained from entering debts of this nature are used to purchase buildings, equipment, and other fixed assets.

## Net Worth

*WHAT IS NET WORTH?*

Basically, the net worth entry reflects the owner's equity or investment in the business. These assets are acquired either by incurring debt or with funds invested by the owner. The net worth entry on a balance sheet of

a sole proprietorship states the owner's investment in the business. The net worth entry for a partnership states each partner's investment separately.

The principal function of the ownership or net worth entry is to act as a cushion for any losses that may occur. As far as the creditors are concerned, the net worth acts as a protection in case of nonpayment of debt. Businesses that fail will often end up with a net worth that is negative. That means that the creditors not only have a claim on all the assets, but that after all assets are converted to cash, there will not be enough funds to pay off all debts.

## THE PROFIT AND LOSS STATEMENT

*WHAT IS THE PROFIT AND LOSS STATEMENT?*

The profit and loss statement is a financial statement which reflects the income and expenses of a business over a period of time. This contrasts with the balance sheet which provides the financial picture of a business as of a given date, contains a limited amount of information by covering only one business day, and it does not tell the entrepreneur how efficiently the assets of the business are being used. The profit and loss statement is truly an operating record which provides you with measures of your efficiency and ability to make a profit. Exhibit F is a profit and loss statement suitable for the entrepreneur who is just starting a business.

Exhibit F

PROFIT AND LOSS STATEMENT

| | |
|---|---|
| Gross Sales | _____ |
| - Less Returns and Allowances | |
| Net Sales | _____ |
| Cost of Goods Sold: | |
| Beginning Inventory | _____ |
| Plus Purchases and Freight | _____ |
| Minus Ending Inventory | _____ |
| Total Cost of Goods Sold | _____ |
| Gross Profit or Margin on Sales (Net Sales Minus Total Cost of Goods Sold) | _____ |
| - Selling Expenses | _____ |
| - Operating Expenses | _____ |
| Net Profit on Business | _____ |

Exhibit G is another example of a profit and loss statement.

Exhibit G

STATEMENT OF PROFIT AND LOSS

FOR THE PERIOD BEGINNING _____ AND ENDING _____

| | | | |
|---|---|---|---|
| NET SALES | | OPERATING PROFIT | |
| COST OF GOODS SOLD: | | OTHER INCOME: | |
| TOTAL INVENTORIES AT BEGINNING OF PERIOD | | INVESTMENTS | |
| ADD: PURCHASES DURING PERIOD | | CASH DISCOUNTS RECEIVED | |
| TOTAL | | OTHER | |
| DEDUCT: TOTAL INVENTORIES AT CLOSE OF PERIOD | | TOTAL | |
| GROSS PROFIT | | | |
| ADMINISTRATIVE, GENERAL, AND SELLING EXPENSES: | | OTHER EXPENSES: | |
| PROPRIETOR'S SALARY | | INTEREST | |
| DEPRECIATION | | CASH DISCOUNTS GIVEN | |
| SELLING EXPENSES | | BAD DEBTS | |
| OTHER | | OTHER | |
| TOTAL | | TOTAL | |
| | | NET PROFIT OR LOSS TO NET WORTH OR SURPLUS | |

(American Banker's Association, 1940)

## Components of a Profit and Loss Statement

*WHAT ARE THE COMPONENTS OF A PROFIT AND LOSS STATEMENT?*

The profit and loss statement has parts or categories which are commonly used for constructing or presenting the statement. The first, and probably the most important component, is gross sales. In the case of a typical retail business, this component represents the basic source of revenue and is comprised of total revenues received from sales for the year. This item is adjusted to arrive at a net sales figure by deducting returned merchandise or allowances for spoiled or damaged merchandise. If the business is operated by a plumber, contractor, or person who sells services rather than merchandise, the category would be labeled gross billings.

The second component is the cost of goods sold section. The cost of the merchandise that your firm sells should be distinguished from other expenses of doing business and listed separately. This figure represents the total price paid for the products sold during the accounting period, plus in transportation costs.

After you have determined the net sales and the cost of goods sold, it is possible to calculate third component, the gross profit on sales, or what is commonly named gross margin. The gross margin equals sales less cost of sales, which is really the dollar portion of your sales that represents your markup on the inventory.

If in analyzing your profit and loss statement, you find that your profits are not as much as they should be, you can either increase your margin (or markup) on your existing sales volume, or increase the sales volume on the same margin. Gross margin does not take into account selling or operating expenses.

The fourth component includes two categories of expenses: selling and other operating expenses. These are important expenses in most businesses. Selling expenses are those expenses that result from activities performed to increase the sales volume. They would include salespersons' salaries, travel expenses for salespeople, delivery expenses, and advertising. Other operating expenses are those expenses incurred in the general operation and administration of the business. They would include office expenses and salaries, accounting expenses, telephone expenses, repairs for equipment, and depreciation of equipment and building. In short, "other" operating expenses include any expense that is not directly attributable to sales or service income and is considered an overhead expense.

The last component of a profit and loss statement is net profit. The net profit of the business is the final profit after all normal costs and expenses for the accounting period have been deducted. Net profit is the "bottom line" which summarizes the results of your business. For example, the deduction of total selling expenses from gross profit on sales permits the determiniation of net profit on sales.

Net profit on sales indicates the profitability of all buying and selling activities before allowances are made for the general overhead costs of conducting the business.

Net profit does not reflect any income taxes because income taxes are not considered a normal operating expense. If you are operating a sole proprietorship, net profit from your business will be transferred to your individual federal income tax return on Schedule C, Form 1040, and may be only a portion of your total taxable income.

## A Small Manufacturer's Profit and Loss Statement

*DO PROFIT AND LOSS STATEMENTS VARY ACROSS TYPES OF BUSINESSES?*

Because the small manufacturer coverts raw materials into finished goods, the method of accounting for cost of goods sold differs from the method used by wholesalers, retailers, and service firms. As in retailing and wholesaling, computing the cost of goods sold during the accounting period involves beginning and ending inventories, and purchases made during the accounting period. But in manufacturing, it involves not only finished goods inventories, but also raw materials inventories, goods-in-process inventories, direct labor, and factory overhead costs.

To avoid a long and complicated profit and loss statement, the cost of goods manufactured is usually reported

separately. A few of the common terms used in this type of profit and loss statement for a typical small manufacturing company are a) Raw materials-the materials that become a part of the finished product, b) Direct labor--labor applied directly to the actual process of converting raw materials into finished products, c) Manufacturing overhead--depreciation, utilities, insurance, real estate taxes, the wages of supervisors and others who do not work directly on the product, etc. This last term should include all manufacturing costs other than raw materials and direct labor.

## NUMERICAL FINANCIAL INDICATORS

*WHY USE NUMERICAL ANALYSES?*

How can you use the information from the balance sheet and the profit and loss statement for financial management? A visual check of these financial statements will give you a feeling for the state of your business. For instance, they can tell you if your sales costs and profits are close to those projected by you for the accounting period.

In addition to providing a visual review, information in financial statements can be used in other ways. Various useful relationships exist between some of the figures presented. A number of indicators have been worked out for comparing the figures.

## Ratios

*WHY ARE RATIO ANALYSES IMPORTANT?*

In many ways, these indicators, often expressed as ratios, are more useful for analyzing your business operations than the dollar amounts. Computing ratios will make it possible for you to compare your firm's performance with the average performance of similar businesses as well as provide you with clues for determining the trends in your business operations. Ratios will not provide you with any automatic solutions to your financial problems. They are only tools--although very important ones--for measuring the performance of your business. If warning signs appear, look for causes and find possible solutions.

There are four common ratios:

- Current ratio
- Acid-test ratio
- Average collection ratio
- Inventory ratio

### Current Ratio

*WHAT INFORMATION DOES THE CURRENT RATIO PROVIDE?*

One of the most widely used ratios is the current ratio. It measures current assets available agains current debts. Remember that current debts are all debts falling due in a period of twelve months. Usually a current ratio of 2 to 1 is considered good. Below is an example using information taken from a balance sheet:

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\$7,000}{\$3,000} = 2.33 \text{ (or 2.33 to 1)}$$

Although a current ratio of 2 to 1 is generally considered good, determining whether specific ratio is satisfactory depends on the nature of the business and any special characteristics of its current assets and liabilities.

If your current ratio is not as you would want it, then you need to investigate how to decrease your current liabilities or increase your current assets.

## Acid-Test Ratio

*WHAT INFORMATION DOES THE ACID-TEST RATIO PROVIDE?*

This ratio is similar to the current ratio except that the liquid (immediately available) assets are considered in determining the ratio. The ratio answers the questions of whether the business could meet its current liabilities if all cash income from sales suddenly stopped. An acid-test ratio of 1 to 1 is considered good. Here is an example using information taken from a balance sheet:

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\$4,000}{\$3,000} = 1.33$$

Since the acid-test ratio does not include inventories, it concentrates on such liquid assets as cash, government securities, and receivables.

## Average Collection Ratio

*WHAT INFORMATION DOES THE AVERAGE COLLECTION RATIO PROVIDE?*

By computing the average collection ratio you can determine whether your average collection period for accounts receivable is too long. The collection period should not exceed your credit time by more than ten to fifteen days. Knowing the average collection period gives

you information about the quality of your credit accounts. If the amount of time involved in collecting accounts receivables is excessive, the credit collection policies should be examined.

The number of days involved in collecting accounts receivable can be calculated using information from the balance sheet and the profit and loss statement. The formula for calculating the average collection ratio involves two steps:

Step 1 $\frac{\text{Net sales for year}}{\text{Days open for selling}}$ = Average sales each day

Step 2 $\frac{\text{Accounts receivable}}{\text{Average sales per day}}$ = Days involved in collecting accounts receivable.

Using information taken from a balance sheet and a profit and loss statement, the average collection period is computed for a sample firm:

Step 1 $\frac{\text{Net sales for year}}{\text{Days open for selling}} = \frac{300,000}{365}$ = 822 average sales each day

Step 2 $\frac{\text{Accounts receivable}}{\text{Average sales each day}} = \frac{400,000}{822}$ = 49 days involved in collecting the accounts receivable.

Inventory Ratio

*WHAT INFORMATION DOES THE INVENTORY RATIO PROVIDE?*

The inventory ratio tells you how fast your merchandise is being sold by comparing costs of goods sold and average inventory. The ratio for your business should be compared to turnover rates for businesses similar to yours.

A desirable rate depends on your level of business, type of inventory, and location of firm. If your business is subject to seasonal sales, you will want to determine inventory ratio each month. A high ratio usually indicates that your business has inventory that is current and salable and that your firm has good pricing policies. However, inventory ratio may reveal an inventory turnover rate that is too high. This condition can lead to inventory shortages and dissatisfaction among customers who cannot get what they want when they want it.

Information for the ratio is taken from the balance sheet and the profit and loss statement. Below is a formula for determining your inventory turnover:

$$\frac{\text{Cost of goods sold}}{\text{Average inventory}} = \text{times inventory turnover in stated period of time.}$$

## Break-Even Point

*WHAT IS A BREAK-EVEN POINT?*

Another indicator available in helping you determine how well your finances are working is the break-even point. The break-even point is the amount of sales that your business needs to have in order to have neither a loss nor a profit. It is the point where sales volume just covers costs. Of course, you want to make a profit. Therefore, knowing the break-even point will allow you to set your sales goal higher and watch expenses closely. It will also help you determine whether--and when--your business will begin to make a profit.

In order to compute the break-even point or volume, you need the total fixed cost and variable cost figures from your financial statements. The formula is:

$$\text{Break-even point} = \frac{\text{Total fixed cost}}{\text{Selling price--variable cost per unit.}}$$

Consider an example. Your total fixed cost is $15,000. The selling price per unit is $100 and the variable cost per unit is $25. So, in order to break even, you need to sell 200 units.

$$\text{Break-even point} = \frac{\$15,000}{\$100 - \$25} = 200 \text{ units.}$$

Thus more than 200 units will have to be sold before any profit will be realized.

## EXPLORATION ACTIVITIES

Do you feel knowledgeable enough in financial management to put into practice the management tools discussed in this level? The following activities will help you experience some "real" situations. After completing the activities, do a self-evaluation to check your understanding of the material.

### ASSESSMENT ONE

1. Prepare a personal balance sheet using the form contained in Exhibit D or E of the text.
2. Below is a list of current and fixed assets and current and long-term liabilities:

   Short-term loans
   Equipment
   Cash
   Inventory
   Mortgage
   Trade credit
   Land
   Long-term loan
   Accounts receivable
   Building.

   a. Divide the items in the list above into assets and liabilities.

b. Label the items in the list of assets as either current or fixed. Label the liabilities either current or long-term.

3. Distinguish between current and fixed assets.
4. Define these terms:
    a. Cost of goods sold
    b. Net worth
    c. Current liability
    d. Intangible assets
    e. Gross margin.

POSTASSESSMENT

1. Distinguish between a balance sheet and a profit and loss statement.
2. Define assets and liabilities and describe two types of assets and liabilities.
3. Describe the functions of financial management.
4. Describe these ratios and state the formula for each:
    a. Current ratio
    b. Average collection ratio.
5. Discuss break-even volume and state the formula for determining these figures.

Compare your answers to your responses to the pre-assessment. You may want to check your postassessment answers with your instructor.

## SELF-EVALUATION

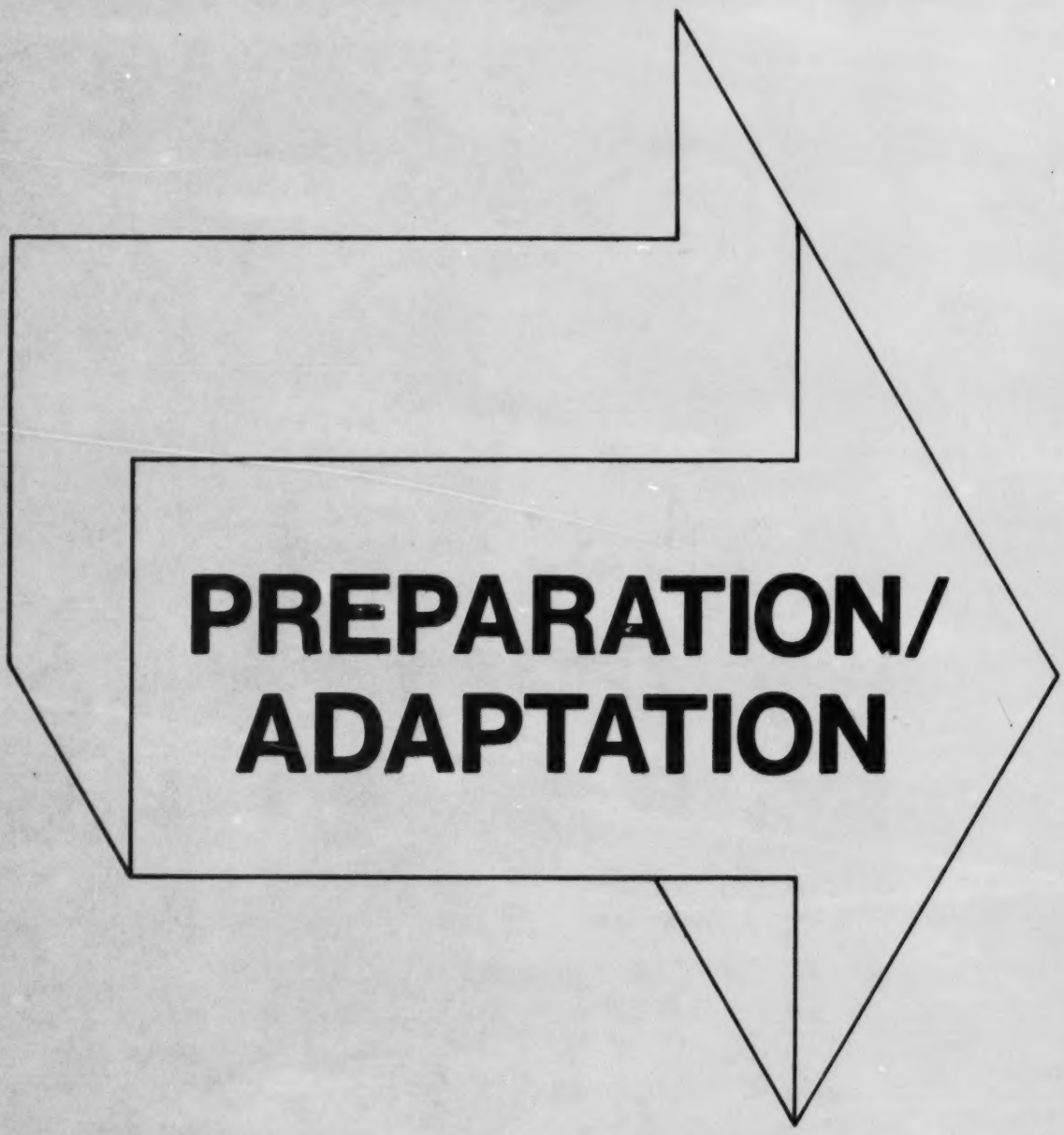
How well did you know the information needed to do the activities?

( ) Very well

( ) Fairly well

( ) A little.

Be honest with yourself. If you feel you don't know the material well enough, it might be helpful to review this section before going on.


PREPARATION/
ADAPTATION

## PREASSESSMENT

Here are some questions that test for knowledge of the contents of this level. If you are very familiar with the information needed to answer them, perhaps you should go to another level or unit--check with your instructor. Otherwise, jot down your answers. After you've read through this level, take the postassessment at the end of the "Preparation/Adaptation Activities" section and measure what you've learned.

1. How are balance sheets and profit and loss statements used in financial management?
2. What are current ratio and acid-test ratio? Give the formulas used to compute each.
3. Identify the components of a change in owner's equity statement.
4. Draw and explain a break-even point graph, including components.
5. What are the similarities and differences between financial ratios and financial statements?

## TEACHING/LEARNING OBJECTIVES

Upon completion of this level, you should be able to:

1. Prepare a balance sheet and a profit and loss statement.
2. Describe the information provided by financial ratios.
3. Analyze the profit and loss statement and the balance sheet of a new business.
4. List reasons for preparing graphs of financial data.
5. Prepare a change in owner's equity statement.
6. Use break-even analysis to determine the relationship between costs and profits.

## SUBSTANTIVE INFORMATION

### FINANCIAL MANAGEMENT TECHNIQUES

*WHY STUDY FINANCIAL MANAGEMENT TECHNIQUES?*

To operate your business successfully, you will have to be able to use financial management techniques. A working knowledge of the basic financial statements used in business will help you plan your anticipated investment in the business, and will help you project a desired income from your business. The key word in financial management is control. A command of the tools and techniques of financial management will help you exercise control. You will also be able to establish fundamentals for success much more easily if you have a solid background in control through financial management.

The fundamentals for success include:

1. Proper balance and investment in assets such as a building, fixtures, and other equipment
2. Sound management of both short-term and long-term debts
3. Sound credit terms and practices relating to selling on credit
4. A reasonable appraisal of whether or not you are realizing an adequate rate of return on your investment, based upon the amount invested in your business and the time you devote to it.

## FINANCIAL STATEMENTS

*DO FINANCIAL STATEMENTS HELP IN DEVELOPING GOALS?*

The balance sheet, profit and loss statement and owner's equity statements are tools an entrepreneur can use to provide a written statement on the financial goals for a business. Before you open your business, you should set goals for your proposed venture. Obviously these goals may change, but by establishing a meaningful financial plan of your operations, you automatically set future goals and targets which are not only measurable but also meaningful in dollars and cents.

### Information From The Balance Sheet

*HOW CAN YOU USE THE BALANCE SHEET?*

The balance sheet is a photograph of the business at a given time, showing its assets, liabilities, and the owner's investement on a particular date. It may also be a projected statement used to determine goal achievement or to provide information for obtaining a loan. The balance sheet is usually prepared on the last business day of the month.

In the balance sheet, the total assets are equal to the total liabilities plus the net worth of the business. The equation for the balance sheet is: Assets = Liabilities + Net Worth. Assets are anything that the business owns, including cash on hand, equipment and inventory. The assets include both current and long-term debts. Net worth is the owner's or owners' investment in the business.

Exhibit H is a pictorial representation of the items found in a balance sheet.

EXHIBIT H

**BALANCE SHEET**

**This is how the business looks on a specific date.**

**ASSETS**

What the business itself owns.

**LIABILITIES**

This side of the balance sheet shows the claims on the assets—by both creditors and owners of the business. The claims of creditors are debts of the business—the LIABILITIES. The owner's claim is his investment in the business—the NET WORTH.

CURRENT ASSETS: In varying states of being converted into cash—within the next 12 months.

CASH: Money on hand, in the bank.

ACCOUNTS RECEIVABLE: What the customers owe the business for merchandise or services they bought.

INVENTORY: Merchandise on hand:
1) ready to be sold
2) in some stage of production
3) raw material

FIXED ASSETS: Used in the operation of the business. Not intended for resale.

REAL ESTATE: Land and buildings used by the business. Listed at original cost.

LEASEHOLD IMPROVEMENTS: Permanent installations—remodeling or refurbishing of the premises.

MACHINERY, EQUIPMENT, VEHICLES: Used by the business. Listed at original cost.

Less Accumulated Depreciation: These assets (except land) lose value through wear, tear and age. The business claims this loss of value as an expense of doing business. The running total of this expense is the accumulated depreciation.

NET FIXED ASSETS: Cost of fixed assets less depreciation = Present Value.

CURRENT LIABILITIES: Debts owed by the business to be paid within the next 12 months.

NOTES PAYABLE: IOU Bank or Trade Creditors.

ACCOUNTS PAYABLE: IOU Trade & Suppliers.

INCOME TAXES: IOU Government.

LONG-TERM LIABILITIES: Debts owed by the business to be paid beyond the next 12 months.

MORTGAGE: On property.

NET WORTH: Owner's (or stockholders') claim on the assets of the business; his investment. His equity in the business.

For Proprietorship or Partnership: MR. OWNER, CAPITAL: Owner's original investment plus any profit reinvested in the business.

For Corporation:
CAPITAL STOCK: Value assigned to the original issue of stock by the directors of the corporation. If the stock sold for more than the assigned value, the excess will show as:

SURPLUS, PAID IN: The difference between assigned value and selling price of the original issue of stock. (The subsequent selling price of the stock does not change the assigned value.)

RETAINED EARNINGS: Profits reinvested in the business AFTER paying dividends.

BALANCE SHEET EQUATION: ASSETS = LIABILITIES + NET WORTH

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## Information From the Profit and Loss Statement

*HOW CAN YOU USE THE PROFIT AND LOSS STATEMENT?*

The profit and loss statement is like a movie that pictures costs and expense against sales and revenue over a period of time. The profit and loss statement, sometimes called the income statement, has five basic parts 1) total sales, 2) cost of goods sold, 3) gross profit, 4) expenses and 5) net profit. The "bottom line" on the profit and loss statement shows whether the business made or lost money during the period (Exhibit I).

EXHIBIT I

THE JOHNSTON CITY DISCOUNT STORE

Profit-and-Loss Statement

| | | | Explanation |
|---|---|---|---|
| 1. | Net sales | $125.000 | Amount received or receivable from customers, excluding sales tax, discounts, returns, and allowances. |
| 2. | Cost of goods sold | 70.000 | What the goods you sold cost you to make or buy. |
| 3. | Gross margin | $55.000 | The difference between net sales and cost of goods sold. Also called gross profit. |
| 4. | Selling expenses: | | |
| | Salaries | $12.000 | Salaries and wages paid to sales personnel. |
| | Commissions | 4.000 | Commissions paid to sales personnel. |
| | Advertising | 4.000 | Amount spent to attract customers and increase sales. |
| | Total selling expense | $20.000 | |
| 5. | Selling margin | $35.000 | |
| 6. | Administrative and general overhead costs | 10.500 | Expenses of operating the business, exclusive of selling expenses. For single proprietorship, does not include compensation to the owner. |
| 7. | Net profit before taxes | $24.500 | |

From Principles of Small Business Management by S. N. McFarlane. Copyright 1977, McGraw-Hill Book Company. Used with permission of McGraw-Hill Book Company.

## Owner's Equity Financial Statement

*WHAT IS AN OWNER'S EQUITY FINANCIAL STATEMENT?*

The third fundamental financial statement is the change in owner's equity schedule. The change in the owner's equity statement reflects those significant items that change the net worth or the amount of capital or funds invested by the owner of the business. This schedule includes the owner's withdrawal or salary. Other adjustements indicated on this financial statement are additional investements by the owner of the business or possibly a write-down or an adjustement for value of equipment and building. For the new entrepreneur, it is important to remember that additional capital may be needed to keep the business in operation and that nonrecurring items such as a write-down of business equipment may be necessary. These changes will be reflected in the change in owner's equity financial statements. They should also be considered as an integral part of the firm's operating records. Exhibit J is a proforma schedule which reflects the statement of the proprietor's capital and shows any changes in the owner's equity.

EXHIBIT J

J. Q. Entrepreneur Business
Statement of Change in Owner's Equity
For Year Ending December 31, 19____

| | | |
|---|---|---|
| J. Q. Entrepreneur, capital, January 1, 19__ | | xxxx.xx |
| Additions | | |
| Net profit from profit and loss | xxxx.xx | |
| Additional capital contribution | xxxx.xx | xxxx.xx |
| Deductions | | |
| Withdrawals for 19__income taxes | xxxx.xx | |
| J. Q. Entrepreneur's salary | xxxx.xx | |
| Write down in value of store property | xxxx.xx | xxxx.xx |
| J. Q. Entrepreneur's capital, December 31, 19__ | | xxxx.xx |

## FINANCIAL STATEMENT ANALYSES

*HOW ARE FINANCIAL STATEMENTS ANALYZED?*

There are various financial reports that can be helpful in financial management. The principal ones are the balance sheet and the profit and loss statement. They are the basis for financial analyses of your firm. Financial statement analysis is a control method in which information from both the balance sheet and profit and loss statement is examined and relationships among items are established and compared. Information from current and projected statements can be analyzed in the same way. These comparative measures (stated as ratios) answer questions such as: Can the company pay its bills on time? Is the money invested in the firm bringing you as much profit as it could? Careful financial analyses not only help you in assessing the firm's financial condition but also assist you in making sound management decisions.

### Financial Ratios

*HOW USEFUL ARE FINANCIAL RATIOS?*

Financial ratios make it possible for you to compare your company's performance with the average performance of similar businesses. However:

- All businesses are not exactly comparable. There are different ways of computing and recording financial data on financial statements. Therefore, there may not be exact points of comparison; that is, figures for your business may not exactly compare to those for a business whos figures are computed or recorded in a different manner.

- Ratios are computed for specific dates. Unless the financial statements are prepared often, the most recent data of your firm may be inaccurate.
- Financial statements show what has happened in the past. One of the best uses of a ratio is to provide you with clues regarding future problems and opportunities. But since ratios are based on past performance, you will need to use your entrepreneurial skills to predict and make judgements about the future.

Trade associations regularly publish ratios for retail, wholesale and manufacturing firms. Dun and Bradstreet, Inc. annually publishes business ratios. If you use the services of a large public accounting firm, they will probably have access to standard ratios and can advise you regarding your firm's financial condition.

The four "key" business ratios include 1) current ratio, 2) acid-test ratio, 3) debt to tangible net worth, and 4) inventory ratio.

Current Ratio

*WHAT IS CURRENT RATIO?*

Current ratio is one of the most commonly used measures of a firm's financial strength. The main question it answers is: Does your firm have enough current assets to meet its current debts--with a margin of safety for possible losses such as inventory shrinkage or uncollectable accounts?

Current ratio is current assets divided by current liabilities. This figure should be at least 2:1, thus providing ample margin for eventual payment of current debts. The current ratio is computed by using this formula:

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

There is a difference between current ratio and working capital. Working capital represents the dollar amount of current assets minus the dollar amount of current liabilities. When computing working capital remember that your inventory may be highly seasonal, thus making it easy to overstate your working capital. Usually your liabilities are items due within one year and payment cannot be postponed. It is your current assets that are subject to analysis, they should be examined carefully before computing the final figure. Therefore, if a substantial amount of the working capital is tied up in accounts receivable, you may want to consider the policy of accepting national and bank credit card purchases. This would partially minimize your receivables. However, there is usually a 3% to 5% charge for converting your receivables into cash when you use national and bank credit card systems.

## Acid-Test Ratio

*WHAT IS ACID-TEST RATIO?*

A more accurate ratio, which measures the debt paying ability of a business, is the acid-test ratio. The acid-test ratio measures only cash and accounts receivable as the current assets against all of the current liabilities. In other words, inventory has been eliminated from the current assets and the ratio calculated is the adjusted current ratio. The rule of thumb is that this figure should be 1:1.

The acid-test ratio is computed by using this formula:

$$\frac{\text{Cash + receivables + government securities}}{\text{Current liabilities}}$$

This ratio will show if you should have enough in cash and accounts receivable to pay all of your current liabilities at any one given time. It answers the question: If all cash income from sales were to stop, could the firm meet its current debts with readily convertible funds:

## Debt to Net Worth

*WHAT IS DEBT TO NET WORTH RATIO?*

The debt to tangible net worth ratio is another "key" ratio. Debt, of course, represents all debts--both current and long-term. Tangible net worth is the worth of a business, minus any intangible assets such as goodwill, trademarks, patents, copyrights, or franchise fees. Intangible assets that have an indeterminable value should not be included in net worth. For example, goodwill represents a value of earning power acquired over a period of time. For a new business, its value is somewhat vague, and does not need to be added into a ratio which compares what the firm owes to what it owns.

If the ratio of debt to tangible net worth is greater than 1:1, then the business is undercapitalized and debt should be reduced or additional capital should be invested. A lender, such as a bank, will find it difficult to lend money to a firm whose debt exceeds the net worth.

To determine the debt to tangible net worth ratio, use this formula:

$$\text{Debt to tangible Net Worth} = \frac{\text{Current liabilities}}{\text{Tangible net worth}}$$

Inventory Ratio

*WHAT IS INVENTORY RATIO?*

Inventory ratio measures "costs of goods sold" against average inventory. This ratio tells you how fast your merchandise is being sold. The formula for determining inventory turnover is:

$$\frac{\text{Cost of goods sold}}{\text{Average inventory}} = \text{number of times inventory turns over in a stated time period}$$

Usually, a moderately high ratio indicates that your inventory is current and saleable and that your firm has good pricing policies. An extremely high ratio may indicate that your inventory turns over too often--this may lead to shortages and customer dissatisfaction. A study of turnover rates in similar businesses will help you determine the appropriate rate for your business.

## FINANCIAL PROJECTION: A CASE STUDY

*HOW CAN FINANCIAL PROJECTIONS HELP?*

Betty Jones owns and operates Jones Gift Shop. The shop, located in a New Jersey resort town, is a seasonal business open only in the summertime. The store site is rented. Jones selected the site herself. She then became a part of a national franchise organization.

by paying the one-time fee of $1,000. She now pays a $100 fee each year as dues to the organization which provides advertising and other management assistance services. Today the business is doing well. Betty Jones took a number of steps to minimize her risks.

Jones began her business venture with $10,000 and several trips to a competent accountant. On her first trip she presented the accountant, Sharon Barnes, with the following investment breakdown:

| | | |
|---|---|---|
| 1. | The owner | $ 6,000 |
| 2. | Trade credit | 3,000 |
| 3. | Note (payable to an individual or to a bank) | 1,000 |
| | TOTAL | $10,000 |

Using this breakdown, Barnes developed the projected balance sheet shown in Exhibit K. Exhibit K shows that only $4,000 of the original $10,000 is to go for inventory. The remaining $6,000 is earmarked for working capital, equipment, and the franchise fee. During that first meeting, Jones began to think of the balance sheet as a financial picture of the shop as of a specific date. Before she left, Barnes constructed ratios based on the opening-day figures. The current ratio was greater than 2:1 (which is the commonly accepted minimum) and the acid-test ratio, a ratio that reflects Jones' ability to pay current debts, was a favorable 1:1. Barnes also calculated a debt-to-tangible-net worth ratio be measuring the $4,000 debt against a tangible net worth of $5,000 ($6,000 minus the $1,000 franchise fee). After allowing for intangible assets, Barnes came up with an 8:1 ratio. This

EXHIBIT K

Jones Gift Shop

Projected Balance Sheet

| ASSETS | Opening Day | End of Year 1 | End of Year 2 | End of Year 3 |
|---|---|---|---|---|
| Cash | 3,000 | 2,000 | 2,000 | 4,900 |
| Inventory | 4,000 | 5,000 | 6,000 | 7,000 |
| Accounts Receivable | ---- | 2,600 | 2,900 | 3,000 |
| Total Current Assets | 7,000 | 9,600 | 10,900 | 14,900 |
| Equipment | 2,000 | 1,500 | 1,000 | 500 |
| Building | ---- | ---- | ---- | ---- |
| Other(Franchise Fee) | 1,000 | 1,000 | 1,000 | 1,000 |
| Total Fixed & Other | 3,000 | 2,500 | 2,000 | 1,500 |
| Total Assets | 10,000 | 12,100 | 12,900 | 16,400 |
| **LIABILITIES** | | | | |
| Accounts Payable | 3,000 | 3,700 | 4,000 | 4,500 |
| Other Debts Due within 1 Year | ---- | ---- | ---- | ---- |
| Total Current Liabilities | 3,000 | 3,700 | 4,000 | 4,500 |
| Long-Term Debt | ---- | ---- | ---- | ---- |
| Notes Payable to Others | 1,000 | 500 | ---- | ---- |
| Total Long-Term Debt | 1,000 | 500 | ---- | ---- |
| Total Debt | 4,000 | 4,200 | 4,000 | 4,500 |
| Owner's Equity | 6,000 | 6,900 | 8,900 | 11,900 |
| Total Liabilities & Owner's Equity | 10,000 | 12,100 | 12,900 | 16,400 |
| Current Ratio | 2.33:1 | 2.59:1 | 2.72:1 | 3.31:1 |
| Acid-Test Ratio | 1:1 | 1.24:1 | 1.22:1 | 1.75:1 |
| Debt to Tangible Net Worth | .8 :1 | .7 :1 | .5 :1 | .24:1 |

too, was a favorable ratio. It indicated that Jones had more invested in her business than her creditors did.

During that first meeting, they also discussed the income Jones hoped to earn through the shop. Jones recognized the importance of establishing financial goals. "To do this we should prepare a profit and loss statement for the shop," Barnes advised. She explained that a projected profit and loss statement:

1. Establishes goals and timetables for reaching the goals.
2. Describes anticipated trends in profits or inventory turnover.
3. Relates the profits of the business to the investment in the business.
4. Becomes a base or a benchmark which, when compared to actual figures, can be used to adjust projections.

Sharon Barnes suggested they do some research before their next meeting. They would need three other statistics 1) average merchandise turnover rate, 2) average markup on margin, and 3) profits as a percentage of sales for business similar to Jones Gift Shop, to develop an accurate projection. Between meetings, Barnes obtained figures from the local Chamber of Commerce. Jones completed her own research by visiting the local Small Business Administration (SBA) office. She also obtained information from trade associations, the local library, and Dun & Bradstreet, Inc.

Jones arrived at the second meeting knowing a little more about average merchandise turnover, average markup, and profits as a percentage of sales. Barnes began their session by explaining,

"Merchandise turnover is nothing more than the number of times that the average inventory of your business turns over or is sold in a given time period. As an entrepreneur, it will be necessary for you to project or estimate the investment you will carry in inventory and the cost of goods sold in your shop for any given operating year.

"Average markup or margin," Barnes continued, "Is computed by dividing the markup in dollars by dollar sales. The percentage that results will help you estimate your gross margin based on an estimated level of sales.

"To complete an accurate statement you must also measure profits as a percentage of sales. You can do this by dividing the net profit (the bottom line) by sales. This should be net profits before income taxes, as other income items may enter into your tax calculations."

Between sessions Barnes had completed the three year profit and loss projection for the gift shop shown in Exhibit L. They discussed the projection, referring at times to the projected balance sheet (Exhibit K) developed during the first meeting. Note that at the end of the second year, the shop continues to show improvement in the balance sheet. The current ratio is 2.72:1, the quick ratio or ability to pay all current debts has improved considerably, and the debt to net worth ratios has declined to .5:1. Profits are being invested in inventory and the margin or average markup has continued to average over 50%. At the end of the third year,

EXHIBIT L

Jones Gift Shop

Projected Profit and Loss

| | First Year | Second Year | Third Year |
|---|---|---|---|
| Gross Sales | 22,500 | 30,000 | 34,000 |
| Less: Returns - Allowances | 1,500 | 2,000 | 2,500 |
| Net Sales | 21,000 | 28,000 | 31,500 |
| Cost of Goods Sold: | | | |
| Beginning Inventory | 4,000 | 5,000 | 6,000 |
| Plus Purchases - Freight | 10,000 | 14,000 | 16,000 |
| Minus Ending Inventory | 5,000 | 6,000 | 7,000 |
| Total Cost of Goods Sold | 9,000 | 13,000 | 15,000 |
| GROSS PROFIT (MARGIN) | 12,000 | 15,000 | 16,500 |
| Less: Selling Expenses: | | | |
| Sales Force Payroll | 2,500 | 3,500 | 4,000 |
| Commissions | ---- | 500 | 750 |
| Advertising | 3,000 | 2,500 | 2,000 |
| Operating Expenses: | | | |
| Utilities | 900 | 1,400 | 1,650 |
| Rent | 3,600 | 4,000 | 4,250 |
| Other | 600 | 600 | 600 |
| Total Expenses | 10,600 | 12,500 | 13,250 |
| NET PROFIT BEFORE TAXES | 1,400 | 2,500 | 3,250 |
| Less Income Taxes | ---- | ---- | 250 |
| NET PROFIT AFTER TAXES | 1,400 | 2,500 | 3,000 |
| Average Inventory Turnover | 5.0 | 5.45 | 5.23 |
| Average Markup or Margin (%) | 53.3% | 53.5 % | 48.5 % |
| NET PROFIT AS % OF SALES | 6.6% | 8.3 % | 9.5 % |
| NET PROFIT AFTER TAXES AS % OF OWNER'S EQUITY | 10.4% | 36.2 % | 33.7 % |

the business appears to be prospering, as the owner's original investment has now increased to $11,900 from $6,000. This reflects the profits from three years of operation. In Exhibit L, note that first year sales are estimated to be $22,500, with increased to $30,000 in the second year, and $34,000 in the third year. This projected income statement is very important.

Since the gift store business has a relatively high markup (over 50%) it will probably have a low inventory turnover rate. High markup businesses are usually characterized by low turnover of inventory. Average inventory turnover is computed by using this formula:

$$\frac{\text{Gross Sales}}{\text{Average Inventory}} = \frac{\$22,500}{\$4,000 + \$5,000/\ 2}$$

Since the average inventory for the year is $4,500, based on annual sales of $22,500, the inventory is turning over or being replaced on the average of only five times a year.

Barnes prepared this projection knowing that most businesses characterized by low inventory turnover are often plagued by inventory obsolescence due to style or fad changes. Since the business is a gift store, the accountant advised Jones to keep this in mind when planning inventory. "Stock those items which may decline in value below the cost paid for them at a minimum. Since one of your objectives in financial planning is control over the amount of debt and its relationship with the total assets of the business," Barnes advised, "the important of arriving at both the current ratio and debt to net worth ratios quickly

cannot be underestimated."

Exhibit K shows that at the end of the second year, the business has expanded somewhat since assets now total $12,100. The current ratio has improved since first-year profits of $1,400 have been put back into the business as inventory and accounts receivable are being carried.

As the meeting ended, Barnes discussed Exhibit L. "This projected profit and loss statement shows estimates for your business for the first three years of operation. By making a detailed projection of what you hope your profits will be in the near future, you have set definite attainable goals. However, that the projection of profit and loss is not something that is chiseled in marble. By their very nature, goals require change. One of the most common mistakes you can make in financial planning is to anticipate a greater sales volume than can be achieved. You can compound the error by overstating the margin or markup percentage.

"As you can see, some very important financial information can be obtained from the projected profit and loss statement. Many meaningful comparisons, in addition to regular assessments, should be made. When you make assessments, be sure that the net income for the period should be stated as a realistic, attainable goal."

Jones was pleased with the accountant's work and resolved to follow her advice. She watched inventory turnover closely. By doing so she learned which items were vulnerable to obsolescence

and fashion changes. She also computed average markup or margin. This figure, expressed as a percentage, is the dollar amount of the markup on sales before selling expenses. Jones knew that if this percentage remained high, other selling and general expenses would be less likely to make the business unprofitable. Exhibit L shows that over the three-year period, there is a slight decrease in this percentage (from 53.3% to 48.5%). Sales volume increases, and other expenses decrease proportionately. As a result net profit from the business increases. As previously mentioned, this particular business is characterized by an above average markup. In many types of retailing, the figure would be only 25% to 35%.

Jones computed her net profit after taxes as a percentage of equity. By doing this, she learned how much her investment was making. She decided that if this rate of return were ever to drop to a point where she questioned her reasons for being in her business, she would ask Sharon Barnes to conduct another detailed and careful analysis of the profit and loss items.

## Visualizing Financial Information

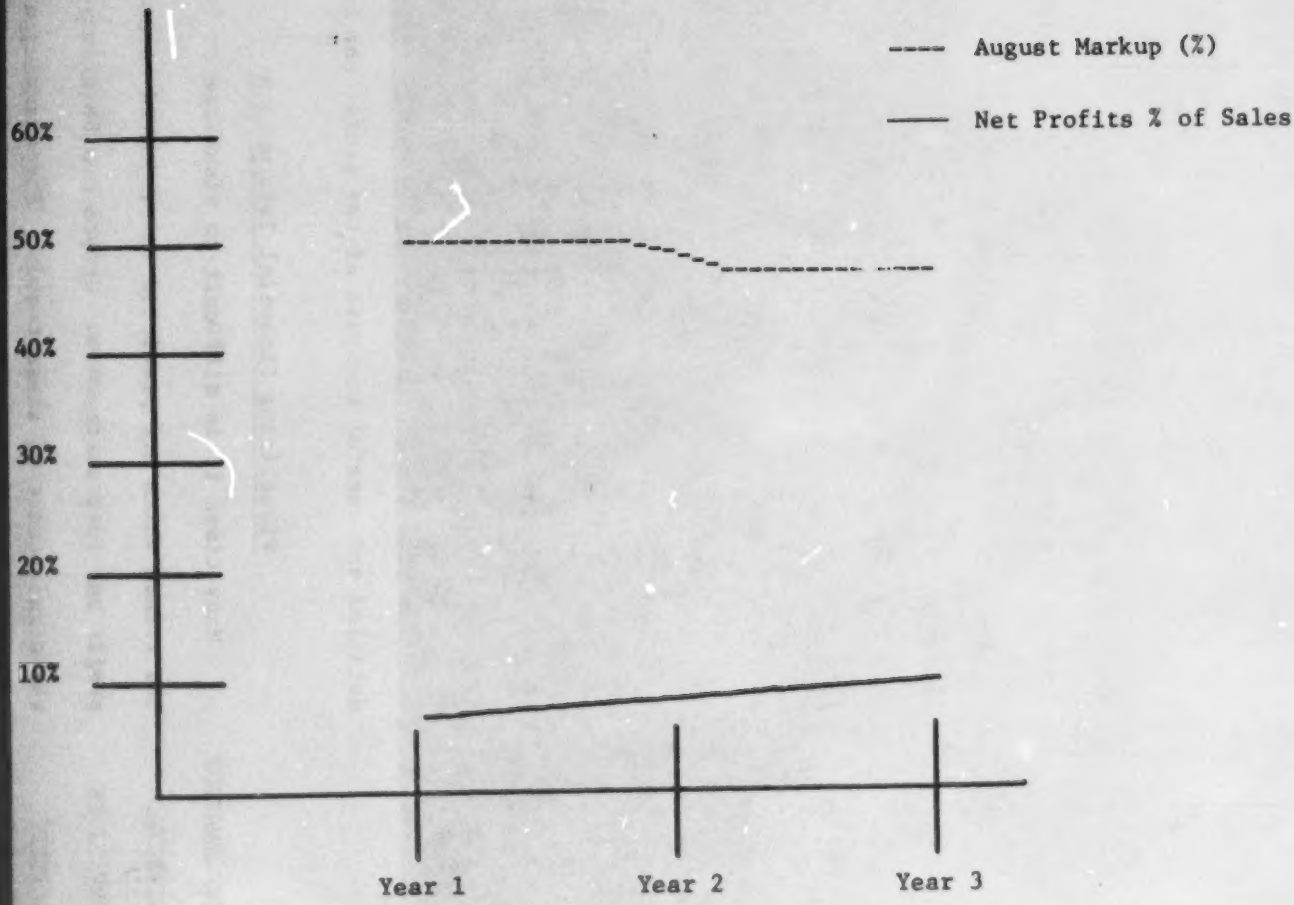
*CAN INFORMATION ON FINANCIAL STATEMENTS BE VISUALIZED?*

Many times it is difficult to visualize or fully understand the trends which are predicted in projected balance sheets and profit and loss statements. Graphs can be drawn which can relate the significance of these trends. For example, a graph can reflect the projected margin percentage and the anticipated percentage of net profits to sales. Exhibit M graphically shows the same

EXHIBIT M

Jones Gift Shop

Bottom Line Graph



percentages that were stated in Exhibit L.

Using graphs to help analyze your business finances might be a helpful technique. You may even want to retain your original projections on a graph and, as you make changes in your balance sheet and profit and loss statement, show these changes using a different symbol. As Exhibit L shows, the percentage of sales continues to increase even though margin or markup declines somewhat. This usually can be attributed to an increase in sales volume and control over expenses of the operation.

## BREAK-EVEN ANALYSIS

*WHAT DOES BREAK-EVEN ANALYSIS TELL?*

Profits made from the sale of your firm's goods and services are the "bread and butter" of your business. Profit levels are determined by the volume of business and the selling price established versus actual costs. One management tool that determines the "right" profit level for your firm is break-even analysis.

### Break-Even Point

*WHAT IS THE BREAK-EVEN POINT?*

Computing the break-even point is one technique available to determine when your business will begin to make a profit. The break-even point tells you how much business your firm will need to do to break even, that is, to operate with neither a profit nor a loss.

To determine the break-even point, you must first determine costs, variable costs, and semivariable costs. Once all costs have been calculated, the following formula can be used to deter mine the break-even point (volume of business):

$$\text{Break-even point} = \frac{\text{Total fixed costs}}{\text{Selling price - variable cost (per unit)}}$$

For example, assume that your total fixed costs are $15,000, and you are selling a product for $100 a unit and the variable cost per unit is $25. In order to break even, you need to sell 200 units.

$$\text{Break-even point} = \frac{\$15,000}{\$100 - \$25} = 200 \text{ units}$$

Thus, if you sell less than 200 units at these costs, you will have a loss. Of course, you will want to do better than break even. If you want to make a profit, you will have to sell more than 200 units at these costs.

## Break-Even Components

*WHAT ARE BREAK-EVEN COMPONENTS?*

Since break-even analysis described the point where income equals total costs, the first two items to be calculated are the fixed and variable costs. Fixed costs do not vary with the level of business activity. Examples include administrative salaries, property insurance, depreciation of equipment, and rent. Variable costs vary directly with the volume of activity. Direct labor and materials are examples. They double if production doubles, and drop to zero if production is zero. Semivariable costs change with the level of business activity, but not in direct proportion. Office equipment or supervisors' salaries might be examples of semivariable costs. Such costs are usually about the same regardless of the level of output.

## Comparing Relationships of Costs to Profits

*WHAT INFORMATION IS OBTAINED?*

Break-even analysis can also help you compare the relationships of cost to profits at different volumes of sales. You can use break-even analysis to determine the profitability of different items in a line of products that you sell. It can answer such questions as: Which items are most profitable? Which are least profitable? Have any items passed their popularity peaks? Have they shown decreasing profits? How many units of the new product will need to be sold before it will begin to bring in a profit?

It is possible to represent visually the relationship of costs to profits at different sales volumes; this is done with a break-even chart. Exhibit N is a break-even chart which not only shows the break-even point, but also shows profits and losses for other volumes of sales. It is based on information for a manufacturing company with costs for one of its products figured as:

- Total fixed costs - $100,000
- Variable costs - $50 per unit
- Selling price - $100 per unit.

Exhibit N shows that profits depend on the number of units sold only when the price and cost patterns do not change. Each of the factors that affect profit can be varied. Knowledge in financial managment would tell you that if you could find a way to reduce fixed costs you would be able to lower the break-even point. Or, you could reduce variable costs, which would affect the total cost line, causing it to rise less rapidly. You could also raise or lower prices. An increase in price would lower the

break-even point again. The situation is similar to the inventor who said that if he could only sell one of his inventions for $500,000, he would make a tidy profit.

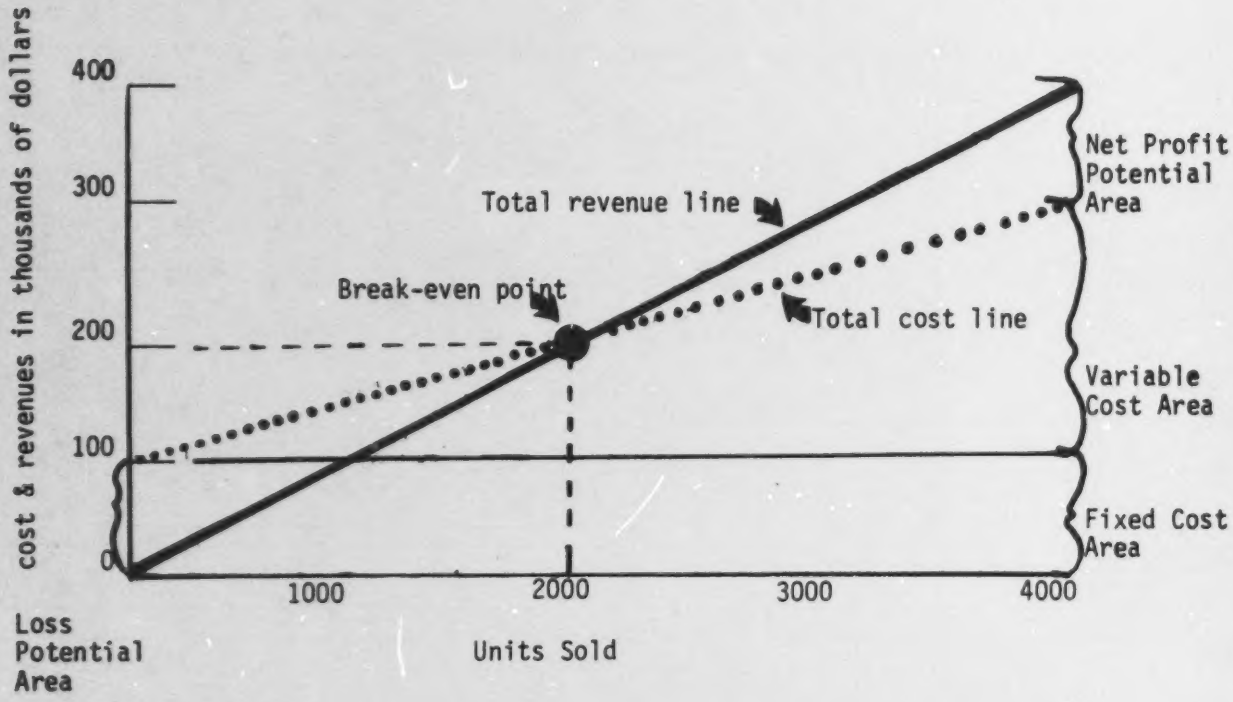
Analysis of Exhibit N will show the following about the break-even point:

- The larger the loss area the greater the down side risk
- The larger the profit area the greater the up side potential or the opportunity
- The larger the fixed costs the higher the risk (increases loss area)
- The larger the proportion of variable costs the higher the risk (increases loss area and decreases profit area).

EXHIBIT N

Break-Even Volume

(Fixed costs, $100,000; variable costs, $50 per unit;
selling price, $100 per unit)




Adapted from Small Business Administration, A Handbook of Small Business Finance. (pp.31-36)

## Minimizing Business Risks

*CAN BREAK-EVEN ANALYSIS HELP REDUCE RISKS?*

The break-even point helps measure the risk of the business venture. The following strategies will help you utilize break-even analysis to reduce risk and unwise investments:

1. Phase in fixed costs of possible. Do not set your initial business goals at $50,000 per month unless you are really sure that such a projection is reasonably accurate.
2. Allow fixed costs to grow only as the business can afford it. Do without some of the expenses in the beginning. For example, start the firm in your home or in someone else's unused facilities.
3. Do not convert variable costs to fixed costs by hiring staff before sales. Reduced losses in the beginning decrease investment and, therefore, conserve equity for the entrepreneur.
4. Contract for early production if necessary, based on profitable trends.

## PREPARATION/ADAPTATION ACTIVITIES

Are you able to apply these principles to your business aspirations? Are you now more knowledgeable about the functions of financial management? The following activities should help you check your knowledge.

ASSESSMENT ONE

1. How does the change in owner's equity statement differ from the profit and loss statement?

2a. The following list contains fixed and variable costs for a service business. Define fixed and variable costs and label each cost as fixed or variable.

1. Office space
2. Secretarial service
3. Accounting/bookkeeping
4. Legal
5. Advertising
6. Donations
7. Dues and subscriptions
8. Insurance (Officers)
9. Interest
10. Office supplies
11. Postage
12. Travel/entertainment
13. Telephone
14. Taxes
15. Executive salaries
16. Direct labor
17. Employee benefits
18. Utilities

b. These are additional costs associated with manufacturing. Label these costs as fixed or variable.

1. Materials
2. Depreciation (of equipment)
3. Production supplies
4. Maintenance and repair
5. Utilities (additional)
6. Freight

3. Use information from Exhibit O below and the appropriate formula to calculate three break-even points for a hypothetical service business. This is a very modest one-person office and the costs are three times the manager's salary. Determine your own prices. What fixed costs might be reduced? Remember that a common error of those starting a business is to "forget" certain costs--usually the fixed expenses.

EXHIBIT O

SOME TYPICAL MONTHLY COSTS FOR A HYPOTHETICAL SERVICE BUSINESS

| | |
|---|---|
| **Fixed Expenses** | |
| Office space (900-2300 sq. ft) | $ 400 |
| Accounting (quarterly statements, tax returns) | 50 |
| Telephone/answering service | 125 |
| Secretarial service (half-time) | 250 |
| Furniture - lease (little or no cash down) | 225 |
| Office supplies | 10 |
| Dues and subscriptions | 10 |
| Executive salary | 750 |
| Travel/entertainment | 150 |
| Insurance (for the key person) | 100 |
| Advertising | 150 |
| Postage | 20 |
| | $2230 |
| **Variable Expenses** (assume professional labor) | |
| Direct Labor | $ 750 |
| Employee benefits (20%) | 150 |
| | $ 900 |

4. Describe the nature and value of a projected profit and loss statement for individuals planning to start a new business.
5. Invite an accountant who has worked with small business owners to meet with your group and talk about the need for financial management and the mistakes new owners often make.

POSTASSESSMENT

1. How are balance sheets and profit and loss statements used in financial management?
2. Discuss current ratio and acid-test ratio in detail. In your discussion include the formulas used to compute each.
3. Develop an outline identifying the components of a change in owner's equity statement.
4. Draw a break-even point graph. Be sure to label each component. Explain the drawing carefully.
5. Describe the similarities and difference between financial ratios and financial statements.

Compare your answers to your responses to the preassessment. You may want to check your postassessment answers with your instructor.

SELF-EVALUATION

How well did you know the information needed to do the activities?

( ) Very well

( ) Fairly well

( ) A little

Be honest with yourself. If you feel you don't know the material well enough, it might be helpful to review this section before going on.

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FILM

EXPLORATION LEVEL:

"The Heartbeat of Business" (14 min., sd., color, 16mm).

Available for purchase or rental from Sales Branch, National Audiovisual Center--General Services Administration, Washington, D.C. 20606. Phone (301) 763-1854.

Emphasizes the importance of financial management. Through conversations between the two major charactors and by flashbacks of certain episodes in their business affairs, examples of good--and bad--financial management are dramatized.

RESEARCH AND DEVELOPMENT SERIES NO. 194 C-2

# PACE

## A Program for Acquiring Competence in Entrepreneurship

# Instructor's Guide

## Part III

Being An Entrepreneur

## Unit B

Financial Management

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
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### USING THE INSTRUCTOR'S GUIDE

The Instructor's Guide contains the following:

- Teaching/Learning Objectives (identical to the Teaching/ Learning Objectives found in the PACE unit)
- Teaching/Learning Delivery Suggestions
- Pre/postassessment Suggested Responses

This information is geared towards the three levels of learning, and is designed for use as a supplemental teaching aid. Additional instructions for using PACE, sources of information, and an annotated glossary can be found in the PACE

## PRE/POSTASSESSMENT
## SUGGESTED RESPONSES

### EXPOSURE

1. A balance sheet is a financial statement that tells what you *own* and what you *owe* at any particular date in time.

2. A profit and loss statement contains (a) costs of goods sold, (b) total sales, (c) gross profit, (d) expenses, (e) net profit.

3. Each ratio provides distinct information about the financial condition of a business venture. Ratios provide means for comparing the present state of the venture to previous states and to conditions of similar ventures.

4. The break-even point tells the entrepreneur the volume of business he or she must do to cover the cost of being in business. The business should generate profits above this point.

5. Cost of goods sold and net profit are components of the balance sheet. *Cost of goods sold* is beginning inventory plus purchases and minus ending inventory. It is the amount that it costs to produce or buy the goods sold by a firm. *Net profit* is gross profit less expenses.

### EXPLORATION

1. While a *balance sheet* is a statement of the financial condition of a firm on a specific date, the *profit and loss statement* is a statement of the financial condition of a firm over a specific period of time.

2. *Assets* are balance sheet entries that list what a firm owns. Assets can be current, such as cash, merchandise, accounts receivable, etc.; fixed, such as land, building, equipment, etc.; intangible, such as goodwill, patents, etc.; and also include such things as the cash value of life insurance. Assets are categorized according to the length of time it takes to convert them into cash. *Liabilities* are balance sheet entries that show what a firm owes. Current liabilities are debts that come due within twelve months. Noncurrent or long-term liabilities are debts that will mature in twelve months or more.

3. Financial management is a function performed to assess and control the financial condition of the firm, and to maintain a proper balance between amounts owned and amounts owed.

4. The *current ratio* measures the firm's ability to meet current debts that will mature within twelve months. A good current ratio is 2:1 and can be computed using this formula:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

The *average collection ratio* helps owner-manager determine whether the average collection period for accounts payable is too long. Calculating this ratio is a two-step process. Here is the formula:

$$\text{Step 1: } \frac{\text{Net sales for year}}{\text{Days open for selling}} = \text{Average sales each day}$$

Step 2: $\frac{\text{Accounts receivable}}{\text{Average sales each day}}$ = Days involved in collecting accounts receivable

5. Break-even volume is the volume of business a firm must generate to cover the cost of being in operation. Volume above break-even volume generates profits.

$$\text{Break-even volume} = \frac{\text{Total fixed costs}}{\text{(Selling price) – (Variable cost per unit)}}$$

## PREPARATION/ADAPTATION

1. Balance sheets and profit and loss statements are used to monitor and control financial conditions of the firm.

2. *Current ratio* measures current assets against liabilities. It measures the firm's ability to meet current debts with current assets.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

*Acid-test ratio* measures the debt-paying ability of a business. This figure should be 1:1. This ratio will show if a firm has enough cash and accounts receivable to pay all current liabilities at any given time.

$$\text{Acid-test ratio} = \frac{\text{Cash + Receivables + Government securities}}{\text{Current liabilities}}$$

3. Entries in the outline should include those significant items that change the net worth or the amount of capital or funds invested by the owner in the business.

4. The break-even chart should include a break-even point, and should show profits and losses for various volumes of sales. Net profit, fixed costs, variable costs, and potential net profit and loss areas should be labeled.

5. Financial statements and ratios are similar in that they are both helpful in financial management and provide a basis for financial analysis. Financial ratios, however, are computed using information gathered from financial statements. Ratios make it possible to compare the company's performance with the average performance of similar businesses. Financial statements compare and examine relationships among items in the past, while ratios provide clues regarding future problems and opportunities.

| LEVELS OF LEARNING | TEACHING/LEARNING OBJECTIVES | TEACHING/LEARNING DELIVERY SUGGESTIONS |
|---|---|---|
| | **Upon completion of this level of instruction you should be able to:** | **A variety of different teaching/learning methodologies have been used. To help you organize your work and plan the use of this level these suggestions are made:** |
| **Exposure** | 1. Describe a balance sheet.<br>2. List the components of a profit and loss statement.<br>3. Describe the importance of ratio analysis.<br>4. Explain what is meant by the break-even point. | 1. Interview local small business owners concerning the usage of financial statements.<br>2. Invite a member of a trade association to meet with the group to discuss the importance of ratio analysis.<br>3. Obtain examples of financial statements from local banks and accounting firms. |
| **Exploration** | 1. Describe the difference between a balance sheet and a profit and loss statement.<br>2. Differentiate between current and fixed assets.<br>3. Describe and compute four commonly used business ratios.<br>4. Describe the use of the break-even point and write the formula for computing it.<br>5. Discuss the importance of financial management as it relates to making a profit. | 1. Invite a local banker or accountant to discuss the various aspects of financial management.<br>2. Check "Sources to Consult for Further Information" in this unit for resources which identify operating ratios for various types of businesses. |
| **Preparation/Adaptation** | 1. Prepare a balance sheet and a profit and loss statement.<br>2. Describe the information provided by financial ratios.<br>3. Analyze the profit and loss statement and the balance sheet of a new business.<br>4. List the reasons for preparing graphs of financial data.<br>5. Prepare a change in owner's equity statement.<br>6. Use break-even analysis to determine the relationship between costs and profits. | Have an accountant speak with the group on conducting financial analyses. |

The PACE series consists of these parts and units.

PART I: GETTING READY TO BECOME AN ENTREPRENEUR

- Unit A: Nature of Small Business
- Unit B: Are You an Entrepreneur?
- Unit C: How to Succeed and How to Fail

PART II: BECOMING AN ENTREPRENEUR

- Unit A: Developing the Business Plan
- Unit B: Where to Locate the Business
- Unit C: Legal Issues and Small Business
- Unit D: Government Regulations and Small Business
- Unit E: Choosing the Type of Ownership
- Unit F: How to Finance the Business
- Unit G: Resources for Managerial Assistance

PART III: BEING AN ENTREPRENEUR

- Unit A: Managing the Business
- Unit B: Financial Management
- Unit C: Keeping the Business Records
- Unit D: Marketing Management
- Unit E: Successful Selling
- Unit F: Managing Human Resources
- Unit G: Community Relations
- Unit H: Business Protection

RESOURCE GUIDE